THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

Vol. VI. CHICAGO, APRIL 24, 1886. No. 17.

ORIGINAL ARTICLES.

THE TREATMENT OF COMPOUND FRACTURES BY WIRING AND DRAINAGE.[1]

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Bilroth, in an edition of his "Surgical Pathology," written before antisepticism had begun to struggle for an existence, says: "The treatment of complicated fractures is one of the most difficult problems in surgery. We never cease learning on this point." In this view of the case may be found my apology for the introduction of a seemingly exhausted topic for discussion.

In the procedure I am about to describe, there is no single *detail* which is strictly original, but the procedure as a whole deserves the attention of the profession. When a comminuted fracture comes under my observation, the affected part and its surroundings are carefully cleansed and shaven. Soft parts so ragged and contused, and so situated as to produce separation of the fragments and to act as foreign bodies, are removed; as likewise all foreign bodies; the external wound being enlarged, if necessary, for this purpose. If the part affected be a lower extremity, this is flexed at an obtuse angle. The fragments are then approximated in the most normal position possible. For this purpose projecting sharp points, if denuded and acting as irritants, may be removed, as in Case 4, but an effort should be made to retain all such fragments as means of support, as in Case 2. When the best possible approximation is secured, the fragments are wired or nailed together; silver wire (when of good quality) is preferable, but iron wire is the most attainable and can be readily disinfected by means of heat and rendered properly flexible. Drainage is secured by means of large tubes from the most dependent point. The whole extremity is then covered with an extensive thick antiseptic dressing, and incased in a plaster cast, removable at each dressing. The present procedure has certain very demonstrable advantages in cases which otherwise could not be treated antiseptically in a thorough manner.

In illustration of these advantages the following cases may be cited. *First.* All points of bone and injured tissue fragments, *likely* to act as irritants, are removed, except where bone point is needed for mechanical support. This is well illustrated by the following case:

Case 1.—C. W. S., white, aged 39; a painter; had a recurrent attack of erysipelas, but no venereal disease; he fell from a scaffold, sustaining a compound comminuted fracture of the tibia and fibula.

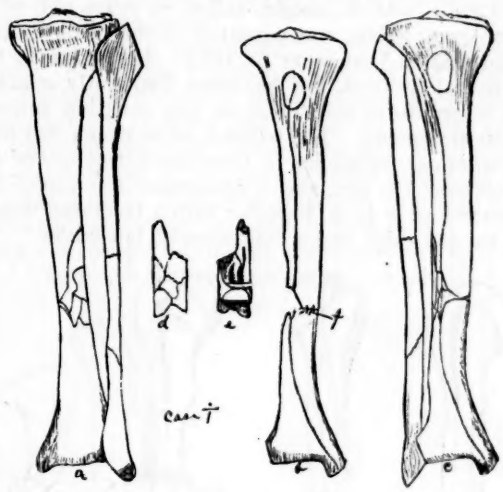
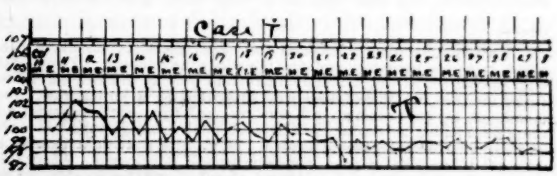


FIGURE 1.—*A*, posterior view. *B*, anterior view. *C*, lateral view. *D* and *E*, fragments. *F*, wire.

In this case the wound was enlarged upwards and downwards with scissors until it was about five inches in length, and seven pieces of bone were removed. Two sharp points of bone were left at the junction of the lower and middle third of the tibia, which could not be retained in normal approximation. These points were thereupon removed sufficiently to secure such retention of normal approximation. The fragments were then wired together and dressed in the manner already described. The further progress of the case is well illustrated in the accompanying chart.



Pulse not recorded.

It may be said that from time to time small frag-

[1] Read in the Section of Surgery and Anatomy at the Thirty-Sixth Annual Meeting of the American Medical Association.

ments of tissue came away. The fragments of bone approximated in the manner already described were denuded of periosteum; the upper fragment about an inch and a quarter and the lower about an inch; despite of this denudation, but little of either fragment exfoliated, as the denuded bone soon became permeated with blood-vessels and retained its vitality. There was no resection of the fibula; the upper fracture of the latter perfectly united; the lower fracture did not, and two months after admission the lower fragment was drilled and has since united. At present writing the patient seems likely to have a useful limb, without more than about half an inch of shortening. The limb in such a case would usually have been amputated, since the extent of the injury would have been considered too great to permit of repair for a useful limb.[1]

Second. Proper retention of the fragments in place is presumably secured, thus avoiding any possible danger of the fragments overriding and injuring the soft tissues.

Case 2.—M. S., single, sailor, 35 years old, of intemperate habits, was admitted to the Cook County Hospital on December 10, 1884. He has never had venereal troubles, but has been frequently attacked by intermittent fever, and on one occasion suffered from erysipelas. The patient, while drunk, fell from a street car, sustaining a compound fracture of the skull over left eye, and a compound fracture of left humerus near neck, together with a lacerated wound of the left thigh and a contusion of left elbow.

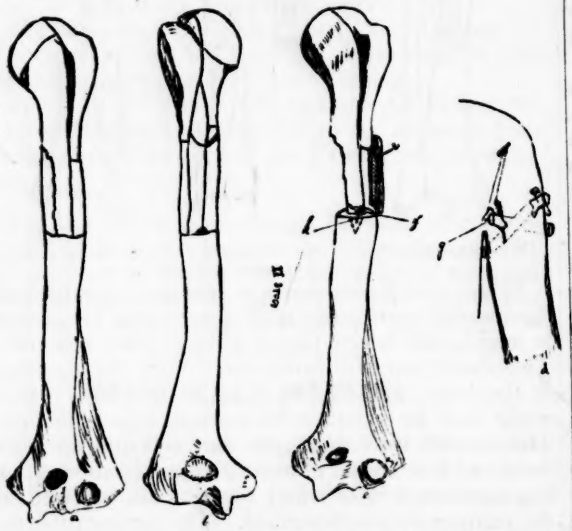


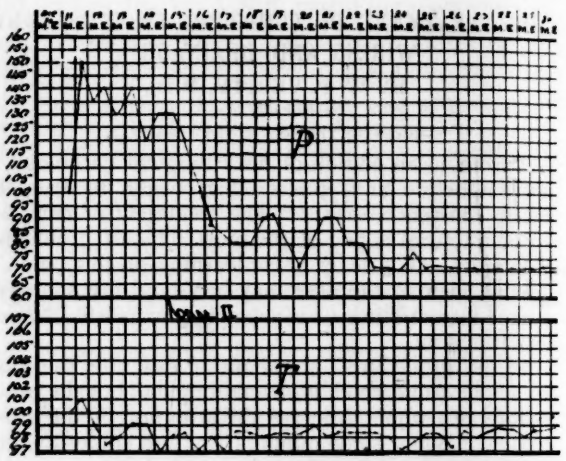
FIGURE 2.—*A*, anterior view. *B*, posterior view. *C*, anterior view. *D*, anterior view of soft parts. *E*, remaining fragment. *F*, dead bone removed March, 1885, and wire. *G*, drainage-tube, ¾ in. diam. *H*, wire.

[1]Two months after admission two small shell-like pieces of bone, which came one from each end, and the wire were removed. Two months later the patient left the hospital on pass and became intoxicated, refracturing the bone, which had been well supported by a strong cast. One month sub eq' ent to this an inch was resected from each fragment and these were joined by one wire. Only one small drainage-tube was used, and but three dressings were needed. D' ring the next eight months he went out at intervals on pass, always returning intoxicated. About thirteen months after admission evidences of union were noticeable for the first time. December 25, 1885, an alarm of fire led to a very rapid flight on the part of the patient without the aid of crutches. The leg swelled considerably. Since that time union has gone on with great rapidity. The limb has regained its usual contour. There is but two and a half inches shortening; the ankle is somewhat immobile, but this immobility is becoming less, and the patient is able to walk short distances without a cane.

The wounds were dressed and the fractures treated in the way already described. December 11, his morning temperature was 100° F., and his pulse 100; evening, 101° F., and the pulse 150. He was given eggnog and alcoholic stimulants.

December 12, his morning pulse and temperature were 145 and 99° F. Evening, 140 and 97.5° F., and there were given three grains of quinine and ten minums of tincture of per-chloride of iron thrice daily, as well as one-twentieth of strychniæ hypodermically. On December 15 the leg was dressed; it looked well; no pus. On the 16th the arm was dressed and there was much discharge of an offensive character, because of sloughing of the soft parts.

December 21 the arm and leg were dressed and



were looking well. At the present writing patient is able to move the arm, but owing to a wound (rendered necessary to remove a fragment of bone and wire) which has not healed, he still keeps his arm in a sling. Supination, pronation, flexion and extension are being regained by him. He can raise the arm to an angle of sixty degrees. There are no trophic or motor disturbances of the hand, which will show that no nerves have been permanently injured.

The advantages of the procedure are well illustrated in this case. One muscle, presumably the short head of the biceps, lay severed on the thorax. The fracture began transversely at the upper portion of middle fifth; then extended longitudinally through the capsule. About two inches of the upper fragment was fractured into four nearly equal parts; the most posterior fragment extended further upward in a V shape than the rest; the most internal and posterior fragments were nearly denuded of periosteum, and were removed; the most anterior fragment was attached to the head of humerus, was partly denuded and was left for mechanical support; the remaining fragment was not denuded and was retained. The sharp corners of the anterior fragment were sawed off and it was inserted to the distance of half an inch in the medullary canal and wired; the other fragment

was left free in close apposition. It will be obvious that in this case the fracture was one in which many surgeons would regard an amputation as an absolute necessity.[1] (See chart and figure 2.)

Third. There is no extension needed, which avoids the necessity of complicated apparatus and procedures such as too often interfere with proper antiseptic dressings.

Case 3.—J. C., aged 27; married; Irish; was injured August 30, 1884, by a hand car from which he was thrown. He struck on one foot, the car running over leg. The tibia and fibula were fractured, and there was also an extensive contusion of integument and muscles. The same day he was admitted to hospital (twenty miles distant from the place where he was injured). The ends of the bones

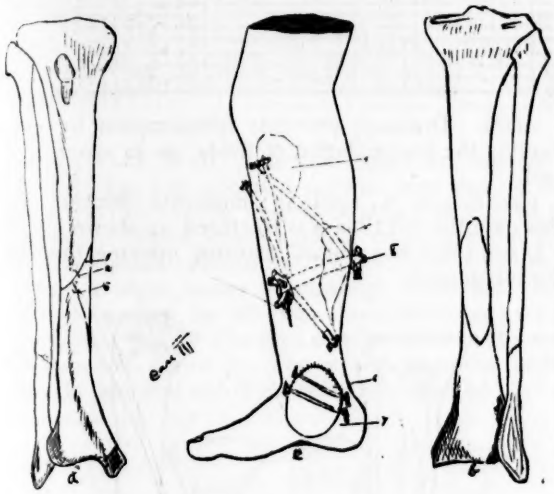
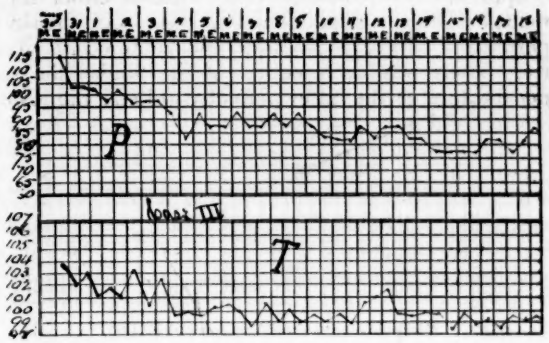


FIGURE 3.—*A*, anterior view. *B*, posterior view. *C*, lateral view soft parts. 1, 2, 3, wires. 4, 5, blood cavities beneath the subcutaneous tissue. 6, flap of soft parts. 7, position of soft parts on admission. 8, drainage-tube.

protruded and were covered by coal dust. The fracture involved the lower part of the middle third of the tibia, which was fractured in three portions; the smaller being triangular. A piece of bone an inch by half an inch was removed from the posterior part of tibia. As the contusion was extensive, seven drainage-tubes were inserted. The fragments were wired together. The triangular piece was wired to the upper by two wires which produced a notch or V-shaped depression into which the lower fragments fitted, to which it was then wired. The lower end of the upper fragment was denuded of periosteum. The temperature and pulse changes are best illustrated by the accompanying chart. The patient recovered perfectly without deformity, the shortening being less than one-eighth inch. The drainage prevented any extensive swelling of the tissues which must otherwise have resulted in considerable discomfort, independently of its influence in preventing blood poisoning. (See bone chart.) Latter part of November patient walked about the ward and did light work.



Fourth. The bones unite quicker, for reasons which will be obvious when the principles which underlie all procedures to secure union of ununited fractures are recollected.

Case 4.—I. S., cigar-maker; aged 51; moderate drinker; compound fracture of left leg. The tibia was fractured obliquely upwards and backwards, about junction of lower and middle third. The upper fragment protruded through the skin two inches and was denuded of periosteum to the extent of an inch and a half. The lower fragment extended upwards and backwards from two to four inches. The fibula was broken two inches above its lower extremity. The projecting point of bone was sawn off, as

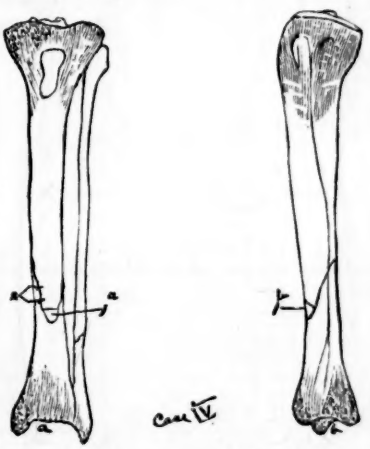
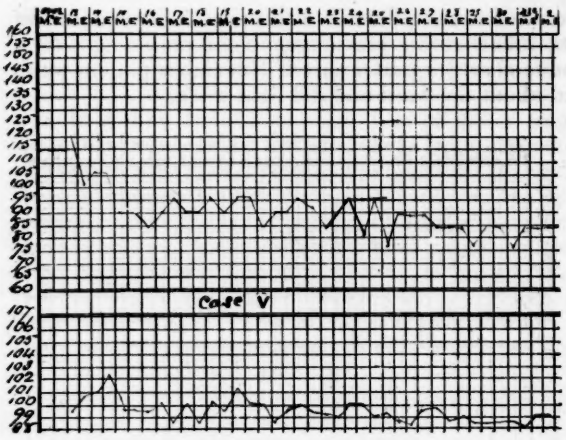


FIGURE 4.—*A*, anterior view. *B*, lateral view. 1 a, 1 b, sharp point removed. 2, wires.

it was denuded, very sharp, and likely to injure the soft parts, and was not needed for support. The fragments were wired together (several blood clots had to be removed, as the soft parts were much contused), before twisting the wires. A drainage-tube was passed through the gastrocnemius. The limb was then dressed in the usual way. The patient recovered with one-fourth inch shortening.[1] (See fever and bone charts.)

[1] June 20, 1885, the patient was etherized and the depth of the pus pocket in the medullary canal determined to be seven inches. The bone was trephined and a drainage-tube inserted at the lower termination of the pus pocket. The wound healed rapidly. The patient spent the summer and winter between Chicago and Milwaukee, and used the arm for many purposes. March, 1886, he returned to the hospita , and at his request two inches of bone were resected in order to so approximate the fragments as to secure union. After the operation the fragments were united by two wires and drainage-tubes inserted. There has been no fever.

[1] Recovery resembled that from simple fracture. One-fourth of an inch shortening resulted. The man is working at his trade.



(Error in chart—should be marked IV.)

Fifth. As a rule, it will be apparent that there can be little if any shortening.

Case 5.—G. T. S., married; white; aged 41; weight 225 lbs.; heavy drinker; has had syphilis twenty years ago. Was admitted to the Cook County Hospital November 21, 1884, having fallen from a fifth story scaffolding and struck on one foot, causing a compound comminuted fracture of right leg. On examination it was found that the tibia was fractured obliquely (see cut 5), the line of fracture being four inches, and the fragments protruded markedly through the soft parts, which were very much lacerated.

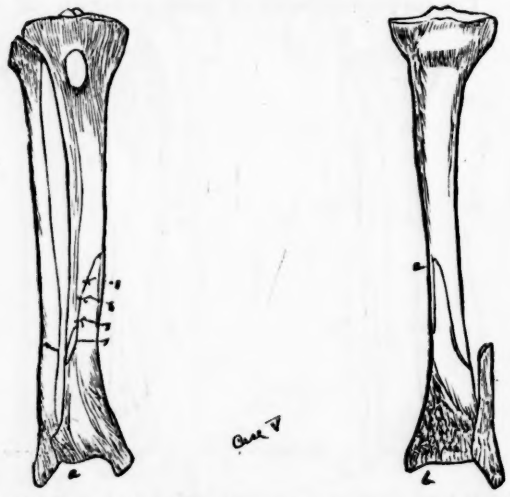
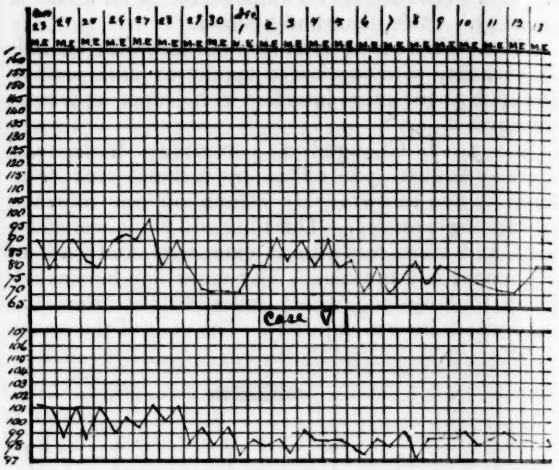


FIGURE 5.—*A*, anterior view. *B*, posterior view. 1, 2, fragments removed on admission. 5, 6, 7, wires.

The fibula was fractured transversely and the foot could be bent at right angles with the leg without resistance. This was treated in the way already described, and the progress of the case towards recovery was only interrupted November 29, by a marked sloughing of tissues around the original wound, and on December 1 more sloughing occurred, causing the loss of substance, skin and cutaneous tissue in calf of leg three inches by four. The patient thereafter did well and was discharged nearly recovered April 1, there being a possibility of a small piece of bone to be removed.[1] (See figure and chart.)



Sixth. Drainage prevents inflammation by preventing the accumulation of fluids, as in cases 1, 2 and 3.

Case 6.—A. S., aged 45; moderate drinker. In this case the left tibia was fractured as shown in cut VI, and there was a small external opening through the integument.

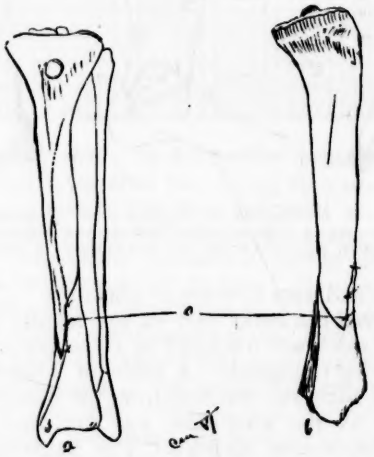
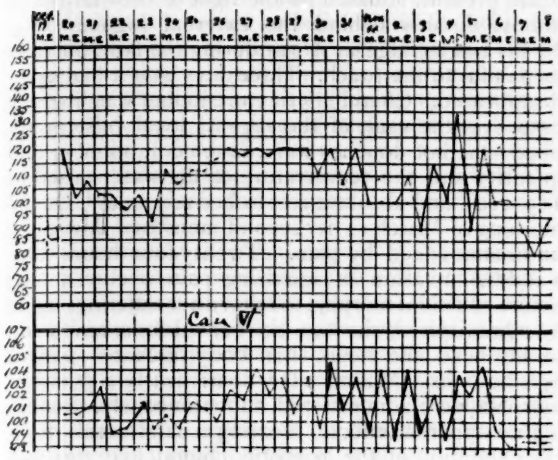


FIGURE 6.—*A*, anterior view. *B*, lateral view. *C*, wires.

The fragments were not comminuted, but an extensive hæmorrhage which had occurred led to an enlargement of the external wound, and showed that the posterior tibial artery had been nearly severed by a sharp point of bone. The artery was tied and the fragments wired, and the wound treated in the usual

[1] April, 1885, patient left the hospital against advice. There was an eighth of an inch shortening. There was a small opening. The limb had a good contour, and union was apparently good, as the leg would sustain much weight. The patient, a chronic inebriate, returned within three weeks suffering from erysipelas, which was followed by abscesses in thigh, knee-joint, and leg. The foot became markedly extended and ankle-joint limited in motion. He reëntered the surgical ward within three weeks much emaciated. In an attempt to flex the foot the leg was refractured. September, 1885, the ends of the fragment were chiseled till the ends could be approximated and then joined by two nails. Good union followed. The leg tissues were flabby. He has since had three recurrent attacks of erysipelas. The leg muscles are much emaciated. The ankle-joint is rather stiff, but improving. The patient can put some weight on the foot. Shortening, one-half inch.

way. Pyæmic symptoms set in and were followed by symptoms of gangrene necessitating amputation, after which the patient made a good recovery.[1]



Case 7.—F. W. B., policeman; aged 27; moderate drinker; has had venereal disease; was shot in anterior part of left leg and after injury attempted to use limb. There was a circular opening about the size of a nickle, extending down to the bone, from which a slight active hæmorrhage occurred. The wound was over the left tibia about the lower part of the middle third. The tibia was fractured in the way indicated in figure 7. The upper fragment being split in two, and the fibula was also fractured.

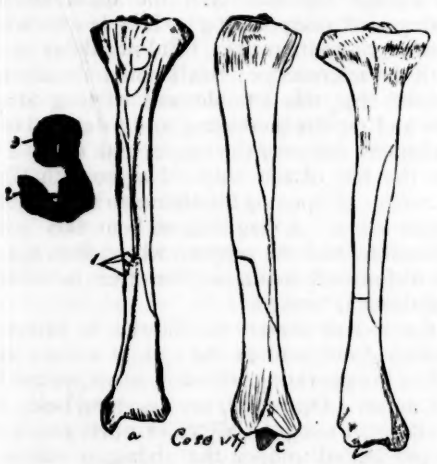
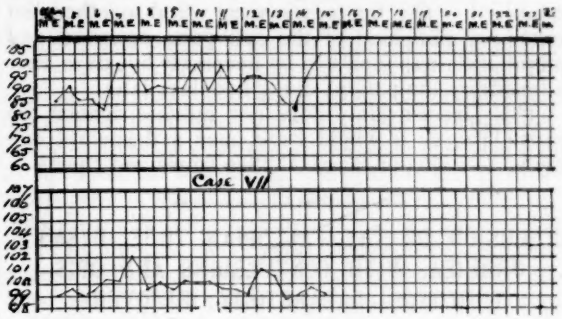


FIGURE 7.—*A*, anterior view. *B*, posterior view. *C*, lateral view. 1, wire. 2, cloth. 3 bullet.

A longitudinal incision was made four and one-half inches in length, through the skin to the bone; the flattened bullet and a fragment of cloth lay about two inches from where the bullet struck. Very efficient drainage was made by a moderate sized tube. The fragments were then wired, as in Case 3. With the exception of the parts much contused by the bullet, the wound healed by first intention. The patient bids fair to make an excellent recovery.[1]



Case 8.—J. C., white; laborer; aged 40; fractured leg; (compound). The wound was at the lower third of the leg; the tibia was fractured into five pieces, and there was an oblique fracture of the fibula. The fracture communicated externally in three places.

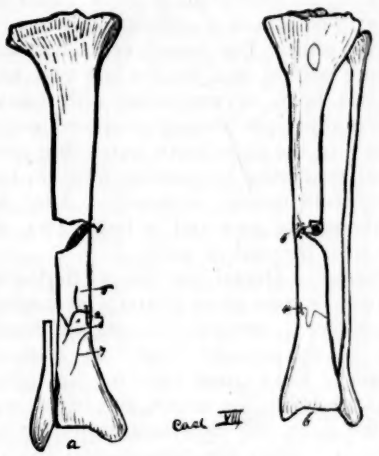
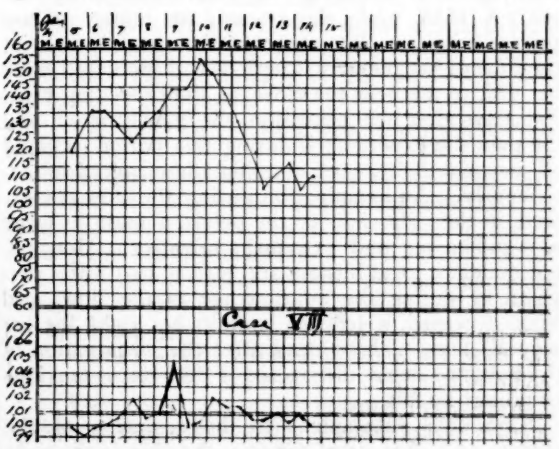


FIGURE 8.—*A*, anterior view. *B*, posterior view. 1, 2, 3, 4, wires. 6 and 7, fissures.



[1] No further history obtained.

[1] Recovered with between half and a third of an inch shortening. During my absence an attempt was made to put on an interrupted cast. The wires broke through, the fragments became dislocated and numerous ulcers resulted from iron bar in cast. Fragments re-approximated and re-wired.

There were several loose pieces of bone removed and the parts surrounding the fracture were severely contused. The fragments were wired together, but extensive sloughing of the soft parts occurred and amputation was found to be necessary five days after admission; the patient dying five days later.

This case certainly does not militate against the procedure, as it would have been a desperate one under any circumstances.[1] (See figure and chart).

OCCLUSION OF THE FALLOPIAN TUBE, DYSMENORRHŒA, WITH CONVULSIONS AND OPISTHOTONOS—LAPAROTOMY; RECOVERY.

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Mrs. R., an American lady, aged 31 years, was confined with her only child in 1876. Her labor was followed with an attack of cellulitis, especially severe on the right side. For seven years her menstrual periods were painful, and for the last two and a half the pain has been accompanied with convulsions. Her menstrual periods became more and more trying, and the pain in the right groin extending down into the leg and rendering locomotion difficult, increased in intensity from month to month. After enduring this disturbance for nine and a half years, she consulted me near the end of 1885.

Examination.—Dorsal decubitus; perineum, partial laceration; cervix uteri, bilateral laceration. Vaginal walls relaxed; cervical and vaginal leucorrhœa.

Neither of the ovaries could be distinctly felt. The portion of the vaginal vault on the right of the uterus was tender to the touch, and to this region she referred the pain she experienced during her menstrual periods. After this examination she returned home, and continued douches of hot water and counter-irritation over the right inguinal region until February 8, 1886, when she became an inmate of my private hospital. She reported that her distress at the time of her menstrual periods had increased since her visit to me near the close of the preceding year. Ten days after her admission she menstruated, and the pain she experienced during this period resisted all reasonable doses of morphia administered subcutaneously. An examination during the flow discovered, in the right side of the pelvis, a mass as large as a guinea egg and extremely sensitive. Morphia, hot douches, local blisters and rest in bed were persisted in during the continuance of the flow, and when it ceased, it left her lame in her right leg for several days. Three days after the termination of the flow, the mass discovered a few days previous could not be felt.

Nine days subsequent to the cessation of the menses and after six of comfort, the pain in the right inguinal region returned; it extended down the leg on that side and rendered locomotion difficult and painful. Bimanual examination revealed the mass again present, situated on the right of the uterus and almost directly behind the external inguinal ring. It was not as large as it was during the flow, but fully as painful to the touch. Three days later it had again disappeared. Churchill's tincture iodine was liberally used over the vault of the vagina; local blisters applied; the hot douches were doubled in number and quantity and the temperature of the water raised to 115–120°, and absolute rest in bed required. On the morning of March 14 her second menstrual flow came on unannounced by pain. Twenty-four hours later a sudden invasion of agonizing pain occurred, and before sufficient morphia to relieve her sufferings could be administered, she had six convulsions, and stood on her head and heels, her body arcuate—perfect opisthotonos. Within a few hours nearly 2 grains of morphia were administered subcutaneously, producing no apparent effect. Fearing a fatal result from the exhibition of the narcotic, chloral hydrates and bromides in large doses were substituted. The hot douches were continued and a blister applied over the right inguinal region. The mass in the pelvis was now apparent to the touch and very sensitive to pressure. On March 19, after four days of severe suffering, the flow ceased, and in three days more the mass in the pelvis had again disappeared.

Diagnosis.—I could make none. Chronic cellulitis, recurring attacks of acute cellulitis, or local peritonitis was evident; but why? Was there pus, or blood in the tube? Possibly; but why no evidence except the pain and the mass alternately appearing and disappearing? Her leucorrhœal discharges might contain pus; I did not delay to examine with the microscope; this I could do afterwards. I reasoned that this trouble was of long standing, steadily and rapidly increasing, and I decided to open her abdomen, discover the cause, and do all I could to save the life of the lady. I agree with Mr. Tait in the matter of opening the abdomen for exploration in certain cases. A diagnosis without this is not always possible, and the surgeon who delays operation until a diagnosis is made, will be often in error, and his usefulness is limited.

On the 22d of March the bowels of this woman were cleaned out, and on the 23d, at 2 P.M., she was placed on the operating table and anæsthetized by the second nurse. Dr. Stone, my assistant, being necessarily absent, I assigned my chief nurse to his place. I then proceeded to open the abdomen with an incision a little short of three inches, and discovering a difficult operation awaiting me, I lengthened the incision to five inches. Through this I turned the intestines out upon a towel above the upper angle of the opening, and gave them into the care of the nurse. An adhesion on the tip of the omentum was detached from something in the pelvis. I then discovered that the ovary and tube on the right side were firmly adherent to each other, to the broad ligament and the roof of the vagina; with great difficulty they were released with the fingers and drawn into view. The pedicle was secured with Tait's knot, and the ovary

[1] The patient's breath, on admission, smelled of whisky, and during his entire hospital sojourn he appeared dazed. The tissues were bleeding, but sloughing did not seem likely to occur; the shock from an amputation would have been greater than from the procedure adopted. We had no post-mortem; urine was not tested; exact cause of death not known.

and tube cut away. The left ovary was small, and both it and the tube appearing to be free from disease, they were not disturbed. The cavity was cleansed, the intestines replaced, the wound closed and the patient returned to bed. Carbolic acid did not touch the patient during the operation, and scalding water alone was used for the instruments and ligatures. The technique as pertaining to cleanliness was satisfactory. Drs. Lee, of Rochester, N. Y., and T. B. La Rue, of Smith's Grove, Ky., were present as visitors and witnessed the operation. I follow Mr. Tait in relying alone on hot water. No carbolic acid touches my patients.

Examination of the parts removed.—The ovary was twice the ordinary size and cystic. It contained a large proportion of healthy ovarian stroma, which was here and there crossed with fine lines of gritty tissue. An empty ovisac lay beneath the surface, ruptured, and proved that true ovarian action existed immediately prior to the operation. The tube was entire, with the exception of the fimbriated end; this was torn and a small portion of it absent. It exhibited the usual appearance, except a redder color. Its calibre was normal, except at the ulterior end, where it was occluded by a stricture so complete that the head of a needle used as a probe could not be passed through it.

Rationale of symptoms.—The stricture in the tube doubtless arrested the ova, and to some extent accounts for the symptoms, but, in my judgment, had the ovary been free, this would not have caused pain. The ovary was bound to the fimbriated end of the tube and the surface of the broad ligament, and at the menstrual periods, its physiological increase was impeded; its products were imprisoned in the surrounding tissue, and the pain was largely caused by the pressure thus produced. During menstrual activity the mass appeared, and disappeared when it subsided. Its recurrence subsequent to the cessation of the flow, I suspect, was due to the excitement in the ovary during ovulation, which certainly occurs independent of menstruation.

Result.—On the day following the operation, the pulse was 108, and the temperature 100¼°; the next day both the pulse and temperature fell below 100. On the fourth day the stitches were removed. On the morning of the fifth day the pulse was 74, and the temperature 99° On the morning of the sixth the pulse was 65, and the temperature 98½° (Fahrenheit). No farther rise in the temperature occurred, and her progress was rapid. From this date no further attention than that given by her nurse was required. She left the hospital for home on April 16; she had not as yet menstruated.

Remarks.—Does this case prove that, as gynecological surgeons, we are too aggressive? Does it prove that exploratory operations are useless and dangerous? So long as proper precautions as to place of operating and environment are observed, such operations will bring neither harm to the patient nor obloquy to the art. Of my last forty-one abdominal sections, none has given me less anxiety and more pleasure than the one just described. A new lease of life is this woman's reward for her confidence in me and my regard for duty.

NINE CASES OF IMPERMEABLE URETHRAL STRICTURE TREATED BY ELECTROLYSIS.

BY WM. T. BELFIELD, M.D.,

GENITO-URINARY SURGEON TO THE COOK COUNTY HOSPITAL, CHICAGO.

The removal of urethral stricture by a galvanic current is a method of treatment whose merits and advantages have been generally ignored by specialists as well as by general practitioners. In very few of the standard text books is this method even mentioned, and in none that I have seen is it intelligently discussed. A few physicians have, at various periods in the past thirty years, briefly tried and then abandoned the current; and the report of their failures had deterred others from further investigation.

Unfavorable and even disastrous results have undoubtedly been produced by electrolysis; but they have generally been caused by the use of an improper current. To dissolve the cicatricial tissues constituting a stricture only the chemical, dialytic effect of the current is required or desired. Now the galvanic current liberates heat as well as chemical force; it will not only decompose a chemical compound, but will also raise a platinum wire to a white heat. The ill effects of the current observed in the urethra have evidently been produced by the heat; as formerly applied, the treatment of stricture by the current was in effect merely a cauterization of the urethra, which resulted of course in severe local inflammation and even extensive sloughing. Yet by proper management a galvanic current can be made to produce a strong chemical effect with an insignificant minimum of heat; or, in technical language, to produce great *intensity* with but little *quantity*. To this end the plates should be small and the fluid weak; but a number of cells (6 to 15) should produce the current.[1] To Dr. Robert Newman, of New York, is due great credit for urging upon the profession the proper use of the current for electrolysis.

During the past two years I have practiced electrolysis for stricture upon thirty-seven patients; and I now use it almost exclusively except for strictures located within an inch of the meatus, and for strictures of large calibre elsewhere in the penile urethra (which I divide with Otis's urethrotome). In my experience the advantages of this method may be summarized as follows:

1. It is applicable to strictures at any point in the urethra.

2. Any stricture or succession of strictures, however rigid and cartilaginous, however long and tortuous, however tight (even if impermeable), can be readily and safely perforated.

3. As a rule it causes no pain nor bleeding, is followed by no chill nor urethral fever, and it is always devoid of danger.

4. When properly handled it can produce no false passage nor other local lesion.

5. The effects are more enduring than those of either cutting or stretching; whether or not they are permanent (as maintained by Dr. Newman), my experience does not yet enable me to assert.

[1] For the past year I have used with great satisfaction the complete and compact portable battery made by the McIntosh Company, 300 Dearborn Street, Chicago.

Even in the treatment of permeable strictures, therefore, electrolysis is generally far preferable to the usual methods, urethrotomy and dilatation. Thus internal urethrotomy should never, under any circumstances, be performed in the membranous urethra; if made in the penile portion when the stricture is very tight, or very long, or very firm, the operation is usually followed by severe fever and local inflammation, occasionally even by death. Dilatation is unsatisfactory—aside from the attendant pain and tendency to induce urethral fever—because its effects are transient, and especially because it is inefficient in numerous cases. We are often called to treat men of middle or advanced age suffering from old and rigid strictures, which are perceptible from the external surface as large, irregular, cartilaginous masses. Every attempt to dilate in these cases is apt to cause a chill and fever, and when this has subsided the surgeon finds the stricture just as rigid and as tight as before. Electrolysis removes these strictures without producing urethral fever.

There are, however, numerous cases of stricture for which electrolysis is not merely preferable to urethrotomy and dilatation; it is, indeed, the only treatment practicable. These cases may be divided into three classes:

1. Impermeable strictures without complete retention of urine. I have treated four such cases where the strictures were impermeable to even the finest instruments, though the patients were still able to force a little urine through them. In each case a No. 12 French bulb was passed into the bladder without difficulty; and the patients were immediately relieved from the annoying frequency and pain of urination. In none of these cases did any chill, urethral fever or other constitutional disturbance follow the operation.

2. Impermeable strictures with complete retention. I have treated by electrolysis three such cases, in each of which the bladder was distended to or above the level of the umbilicus. One was a traumatic stricture following rupture of the membranous urethra by a blow upon the perineum; in one of the others the strictures (of gonorrhœal origin) were scattered along the urethra from meatus to prostate. In each of these I succeeded in passing a No. 10 bulb (French) into the bladder at the first sitting, and to insert a catheter immediately. *Each of these patients was therefore saved from a perineal section, which would otherwise have been inevitable.* One of the three, who had an elevation of temperature previous to the operation, experienced a severe chill and violent fever within the first twenty-four hours; but was entirely recovered on the third day. The other two showed no reaction.

3. Tight and rigid strictures (permeable or otherwise) with perineal or scrotal fistulæ. I was privileged to see and report a most interesting case of this sort treated by my friend Dr. Truman W. Miller. A man 34 years old presented himself to Dr. Miller suffering from numerous rigid strictures involving nearly the whole urethra from the middle of the penile portion to the prostate; not even a filiform bougie could be made to enter the bladder. The perineum and scrotum were literally honeycombed with fistulæ, there being, according to the patient's census, twenty-seven openings, through which urine was discharged as if from a watering-pot; scrotum and perineum were thickened and indurated. The patient was compelled to urinate every half hour or less, rising fifteen to eighteen times at night. He had been under treatment by different surgeons for five years; had submitted to both external and internal urethrotomy, as well as numerous attempts at dilatation. For two years past he had been an invalid, devoting his whole time and attention to constant efforts at emptying the bladder. At the first sitting Dr. Miller passed a No. 10 bulb (French) into the bladder; the patient experienced no febrile reaction, but for the first time in several years passed a fair stream from the meatus. The urine no longer flowed through the fistulæ, and the patient was compelled to rise only once or twice at night. At a second sitting a No. 12 French easily entered the bladder.

The permanence of effects produced by electrolysis is indicated in the following case: In February, 1885, a young German was admitted to the County Hospital, suffering from complete retention of urine caused by an impermeable traumatic stricture of the membranous urethra. I performed perineal urethrotomy without a guide, and passed a No. 14 sound (English) into the bladder. Patient recovered nicely; but in spite of the regular passage of sounds, the stricture rapidly contracted again, until in May (three months after operation) it scarcely admitted a No. 4. I then commenced using upon it the galvanic current, and in six sittings raised the calibre to No. 12 English. Since that time (July 1, 1885) he has experienced no difficulty in urinating, and his urethra readily admits No. 11.

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A CASE OF SYMBLEPHARON OF THE LOWER EYE-LID, WITH OPERATION.[1]

BY ARNOLD P. GILMORE, M.D.,
OF CHICAGO, ILL.

My patient, Mr. Shirley, has kindly consented to appear before the Society this evening. He belongs to that large class of persons who suffer from burns caused by caustics, hot metals, etc., and has what may be called complete symblepharon of the left lower lid. His case is of interest, I think, to those who do work in plastic surgery, and more particularly in surgery involving tissue that has been burned, and has consequently become cicatricial.

The tissue af the eye-lid is such that very slight injuries will cause disturbance of its functions, and deformities. This is particularly true of injuries due to burns. Mr. Shirley's left eye was severely burned with hot iron four years ago. He was treated by a layman for two weeks, and then consulted an oculist. The lid had by this time grown fast to the eye-ball to a considerable extent. Some operation was performed, but no permanent benefit followed. The operation was repeated three times at intervals of

[1] Read before the Chicago Medical Society, March 15, 1886; with exhibition of patient.

several weeks, the lid being detached each time and some plastic operation performed. None of these operations proved to be successful.

I first saw the patient about nine months ago. The entire lower lid, from external to internal canthus, was then adherent to the eye-ball, covering almost the entire cornea, save a small portion at the upper margin. This triangular-shaped tissue was covered by a pale membrane, neither a true skin, nor a true mucous membrane; and I found upon cutting into it that it was composed of cicatricial tissue, very dense and difficult to separate.

My first operation was performed under cocaine, which was ineffectual for so extensive a dissection, and the patient was very restless, increasing greatly the difficulty of the operation. I detached the lower lid and transplanted the conjunctiva of a rabbit to the eye-ball. For six weeks this operation was apparently successful. At this time I left the city and was absent about two months. On my return I was amazed to see the lid fast assuming its original location on the eye-ball.

Six weeks ago I performed the second operation, under ether. I made a thorough dissection, freeing the lid entirely, and making a deep cul-de-sac. This, as you see, would leave the upper half of the eye-ball covered with mucous membrane, and the lower half uncovered. I then dissected a semi-circular band of conjunctiva, about one-third of an inch wide, around and close to the cornea above, leaving a bridge at each end. This band I dropped into the cul-de-sac below and carefully stitched it to the ball.

In order to prevent adhesions, for it is characteristic of this cicatricial tissue to grow underneath and crowd out everything above it, I anchored a silver rope an eighth of an inch thick and one inch long in the bottom of the cul-de-sac by bringing a free strand from either end of this rope through the cheek and tying them together. In spite of this, there was a tendency to form adhesions at both canthi. I threw a silver ligature around these adhesions, and tried to slowly constrict them. But the process was slow and painful, as well as very doubtful. I then had a semi-circular plate of silver made, long enough to fill the space between the external and internal canthi, with two holes at the circumference one-half inch apart, which I threaded with silver wires. I removed the silver rope, which had, by the way, become encysted, and its removal was attended with considerable bleeding and pain. I cut all adhesions and sunk the silver plate into position by bringing the wires through upon the face and fastening them by small lead plates and perforated shot. I claim priority in this method of fastening the plate.

The object of this operation is neither the improvement of the appearance of the injured eye, nor to restore its vision; but to relieve the irritation of the other eye. As may be readily understood, if one eye-ball is securely anchored to the lid the coördinate action of the two eyes is interfered with, and the sound eye becomes weakened. In this case, in order to preserve the health of the other eye, it had become absolutely necessary either to free the eye-ball or enucleate it.

There were two good reasons why I did not advise enucleation. 1st. There is enough clear cornea in this eye to make a small artificial pupil, if he should ever lose the sight of his right eye. 2d. He could never wear a glass eye, and he would be disfigured to that extent.

Only very slight reaction followed these operations, and at no time has there been much pus. I used cold water compresses and kept the wound perfectly clean. The sound eye has grown stronger in the last few days, in spite of the presence of the silver plate, and I am encouraged to believe that the result of the operation will be good.

MEDICAL PROGRESS.

Viburnum Prunifolium (Black Haw) in Abortion and Miscarriage.—Mr. John Henry Wilson, of Liverpool, says: "In the number of the *Liverpool Medico-Chirurgical Journal* for January, 1885, I reported six typical cases treated successfully by this medicine; and since then, after considerable experience, I have been more and more confirmed in its value. I cannot say it has always succeeded, but in those cases in which it failed, I have been able to account for its doing so. Either the medicine has not been commenced in time, and the ovum has been detached before the viburnum has been taken, or there has been some reason to suspect a syphilitic taint; and, in a case of fatty degeneration of the placenta, after not succeeding with the viburnum alone, chlorate of potash was taken in addition, with a good result.

Dr Napier says "some women abort on the slightest provocation," and they continue to do so, although every care may have been taken in the way of rest, medicine, etc., to prevent it. I have had many such cases, and have been greatly disappointed; but when I have had the opportunity of commencing the viburnum shortly before the anticipated period, and continued it at intervals on the first appearance of threatening symptoms, these patients have invariably gone on to the full time, and done well, without being subjected to restrictions or debarred from active exercise.

In the next class of cases, where there may be reason to suspect even a partial separation of the ovum and a dilated external os, with severe pains and hæmorrhage going on for hours, and the patient under the impression that she could not possibly go on to her full time, and when I had almost despaired of any benefit from the medicine, I have been astonished at its effect, more than three-fourths of these cases doing well.

The most sanguine advocate of viburnum could not expect it to do impossibilities, or to prevent abortion when there is "a gaping os, and a detached ovum presenting." One might as well expect to resuscitate a dead body by galvanism. I have never seen ill consequences follow the administration of the medicine, however often the dose has been repeated. In two cases only has it been followed by slight head-

ache. One patient inquired if she had not been taking quinine. The symptoms had been relieved; therefore it was not continued. In the other case, the patient had taken 4 grains of the extract every two hours. The only change was to extend the interval to four hours, and then gradually discontinue it. Some patients have taken viburnum at intervals during the whole course of their pregnancy. It seems to act as an uterine tonic and sedative, and to relieve the woman of those harrassing nervous forebodings which often lead to abortion. The patient, after taking only a few doses, has quite a changed expression. From a drawn, desponding look, her countenance becomes cheerful and happy. Since I have prescribed viburnum, it has not been necessary to keep the women in the horizontal position more than a few days; whereas, under the old treatment, they occasionally spent weeks in bed, and, after all, abortion has taken place. On some of the plantations in America, it is the popular belief that a woman cannot abort if she be under the influence of black haw, although she may be taking medicine with a criminal intent. My experience would go far to confirm that opinion, for I have had patients in whom a succession of abortions have taken place, but, when under the influence of the medicine, they have been able to resist the severest tests—frights, falls, strains, etc.—and no ill effects have followed.

With regard to the mode of administering the drug: at first, the liquid extract was ordered, but the smell was so strong and objectionable that the whole house became impregnated; and in two cases, where the stomach could not retain it, the liquid was given as an enema. I now order the extract in pills of 4 grains, and find it a convenient form; as usually made, they soon absorb moisture, and run into a mass; but I now advise them gelatine-coated. These pills keep any length of time, and I advise my patients to keep a supply by them. I have such confidence in viburnum prunifolium that I am anxious the profession should give it a trial, feeling assured they will not be disappointed.—*British Medical Journal*, April 3, 1886.

THE TRACTION TREATMENT OF MORBUS COXARIUS.—DR. LANNELONGUE, Surgeon at the Trousseau Hospital, recently read notes before the Paris Surgical Society on the method of traction by the application of weight and continuous extension in treating articular affections, especially strumous hip-joint disease. Le Sauvage, of Caen, described in 1830 this method of treatment, but the American surgeons were the first to realize its importance, and to endeavor, by the aid of different apparatus, to keep the head of the femur from contact with the acetabulum. A child, 4 years old, in M. Lannelongue's wards, died in the early stage of hip-joint disease; its limbs had been under the influence of extension since Oct. 22, 1885; a weight of two kilogrammes, increased to three, had been employed. The apparatus was removed four days before the child's death from croup. An experiment on the dead body was made during a severe frost, and the body was perfectly preserved. The pelvis was separated from the trunk and fixed to a plank by nails, the vertebræ and the ilia being firmly secured. The hip-joint was left thoroughly free, so that flexion, extension, and rotation outwards could be effected without hindrance. Extension was practised as on the living body. The weight attached was four kilogrammes. The experiment commenced at 10:30 A.M., and was continued until 7 P.M. Rigor mortis was absent. The operating room was heated to about 77° Fahr. The limb was frozen with salt and ice, and afterwards with salt and hydrochloric acid. At nine o'clock next morning, the limb was as hard as wood. A section was made with a saw in the direction of the neck of the femur. The relations of the contiguous parts were not disturbed. It was easily observed that the articular surfaces were not in contact with each other; there was an interval of half a centimètre between them and the centre of the joint at the highest point. The cartilage of the head and the lower part of the articulation were in contact. The capsular ligament was strained over the head of the femur, and lay close against it; but in the upper part, the space existing between the articular surfaces was filled with a soft fungoid growth. The head of the femur had slipped downwards; one-half, which was not flattened like the upper part, but rounded, lay beyond the cotyloid cartilage. This experiment showed that the separation of the articular surfaces was an actual fact. It must be remembered that this result was due to the application of extension forty-five days before death, not to that practised on the dead body. Nearly the entire capsular ligament had degenerated into fungoid growth, and was unable to resist the influence of traction. M. Verneuil said that M. Lannelongue's experiment explained a fact that had recently come under his notice. On examining a patient with a very severe form of hip-joint disease, he observed that the limb was shortened, and that the great trochanter was displaced upwards. He supposed that there was incomplete dislocation, and decided on practising resection. He then found the head of the femur lying in the acetabulum. It must be concluded that, at a certain period of this disease, the femur becomes deformed, and presents the characteristics of partial dislocation. In future, an apparent shortening, even of three centimètres, accompanied by a moving upwards of the great trochanter, should not warrant the conclusion that the head of the femur is really dislocated. —*London Medical Record*, March 15, 1886.

PAPAIN IN DYSPEPSIA.—DR. GEORGE HERSCHELL, in a note on this subject, says that he finds papain chiefly valuable in the following classes of cases:

1. *Chronic Stomach-Catarrhs of Children.*—Every one of us is familiar with that state in which we find children at times, and which is very frequently called "biliousness." It is characterized by loss of appetite, languor, pasty complexion, loss of sleep at night, and irritability during the day. There is frequently frontal headache, and the urine is loaded with lithates. If this state continue for any length of time the child emaciates, the unhealthy mucus which sheathes the stomach and intestines preventing the due absorption of the food. Cod-liver oil and compound syrup of

the phosphates, which are generally given for the complaint as soon as the child begins to lose flesh, are not assimilated. Sometimes a cough develops, and the child is supposed to have incipient phthisis. I have found these cases rapidly improve with the following prescription:

℞. Papaïn (Finkler)..... gr. ½–gr. j.
Sach. lactis..... gr. j.
Sodii bicarb..... gr. v.
M. To be taken after every meal.

It is also advantageous to give a drop or two of tincture of nux vomica immediately after the meal in a little water. The papaïn probably acts by dissolving the mucus, and thus facilitating the absorption of the food.

2. *Acid Dyspepsia.*—This drug is extremely valuable in this form of indigestion. *a.* As it acts equally well in the presence of an alkali, a sufficient quantity of bicarbonate of soda may be given with it to neutralize the excess of acid in the stomach without impairing its peptonizing power. *b.* Its antiseptic action checks the abnormal fermentation to which much of the accompanying flatulence is due. *c.* An antiseptic can be given with it to increase this action. I usually order it in the following manner:

℞. Papaïn (Finkler)..... gr. ij.
Sach. lactis..... gr. v.
M. To be taken an hour after meals with the following draught:

℞. Sodii bicarb..... gr. xv.
Glycerin. acid carbolic..... m viii.
Spirit ammon. aromat..... m xx.
Aq. ad..... ℥iss.
M. Fiat haustus.

It appears that, taken one hour after a meal, a smaller dose of papaïn is required to produce the same result than if taken with the food.

3. *Cases where Severe Gastric Pain coming on Shortly after Eating is the Prominent Symptom.*—I have tried the drug upon twelve cases of this nature. Complete relief was given in ten, one case was partially relieved, and one completely failed to derive any benefit.

Apart from its internal use, papaïn will probably come into extensive use as a peptonizing agent, to prepare ready digested food and enemata, in the way in which pancreatin and pepsin are used at present. —*British Medical Journal*, April 3, 1886.

Corrosive Sublimate in Diphtheria. — Dr. Werner, medical officer to a circumscribed factory population of about 2000 near Narwa, in the Gulf of Finland, writes in the *St. Petersburger medicinische Wochenschrift* describing the satisfactory results he has obtained in diphtheria by treatment with perchloride of mercury internally, combined with ichthyol inunctions. The disease is very frequent and fatal in the locality, he having attended during the last six years ninety cases, the average mortality of which was between 60 and 70 per cent., the majority succumbing from general weakness when the local affection was passing off or after it had quite disappeared. Last year the type was peculiarly severe. In July, August, and September eleven cases occurred, of which no less than nine proved fatal. From the end of September to the present time, however, during which period there have occurred seventeen cases, all of which were treated with perchloride of mercury, and many of which were very severe, there were only two fatal cases, neither of which was seen till a few hours before death. The author's method is as follows: For young children he dissolves a quarter of a grain of the perchloride in 4 oz. of water, for children of 6 or 7 half a grain in 6 oz. of water, and for adults three-quarters of a grain in 8 oz. of water. This solution is given to the patients while they are awake every twenty or thirty minutes, in measured doses, so arranged that the quantities made up shall last from twenty to twenty-four hours—*i. e.*, about half a drachm in the case of young children and a drachm in that of adults. When a good deal of sleep is obtained larger doses are given at longer intervals. As a rule only milk is allowed as nourishment. If considerable pyrexia exists, an enema of from ten to thirty grains of antipyrin, according to the age of the patient, is given, the rectum having been previously cleared out. Externally ichthyol is diligently rubbed in over the swollen glands three or four times a day, the fingers being wetted with water when dry to permit of the rubbing being continued for some time. For the first two days of this treatment the local affection usually undergoes no improvement, but on the third day it begins to diminish and the general condition becomes better, the appetite increasing and the children regaining their wonted spirits. In no case did the author meet with the extreme debility which was frequent in cases treated by pilocarpine, even when the local affection was decreasing. As the patients approach convalesence the medicine was diminished, so that more than six bottles were never required. Complications never occurred, though three of the patients had previously had scarlatina.—*Lancet*, April 3, 1886.

Calomel as a Diuretic.—Jendrássik has used calomel with excellent results in the dropsy of heart-disease. In six cases, comprising twenty-four separate experiments, diuresis occurred twenty-three times; the maximum daily amount of urine varying between 2,100 and 9,500 cubic centimètres (95 to 339 ounces). The amount of diuresis depends on the dose of calomel given. As a rule, the dose was 0.2 gramme (1½ grain), three to five times a day. The diuresis did not appear till after the administration of the drug for one day, and lasted as long as the œdema was present. Unfavorable symptoms noticed were a metallic taste in the mouth, salivation, and stomatitis; but it is important, the author says, that the diuresis appears before the onset of diarrhœa caused by the drug. The urine contains an excess of chlorides; hyaline casts are often seen. In a case of pleurisy, with effusion, calomel had no effect on the urine. As to the mode of action of the drug in cases of cardiac dropsy, the author says that it can hardly be through the heart, which is only secondarily and slightly affected by calomel. It is probably through the kidneys, a sort of diabetes insipidus being established. As precautions in the employment of this

mode of treatment, small doses of laudanum combat incipient diarrhœa; and for the stomatitis a mouth-wash of chloral of potash is prescribed from the first. Though no harmful action on the kidneys was noticed, a caution is given against employing this treatment in disease of the kidneys.—*London Medical Record*, March 15, 1886.

A TEST FOR SUGAR IN THE URINE.—A Philadelphia correspondent of the *Atlanta Medical and Surgical Journal* states that it might be of interest to mention a convenient substitute for Fehling's solution in testing for sugar in the urine. The ordinary solutions deteriorate on keeping, and are liable to throw down the sub-oxide of copper themselves if not freshly prepared. PROF. HOLLAND, of the Jefferson Medical College, recently gave the following test fluid, which is very efficient, is easily prepared, and is not spoiled by keeping:

GLYCERINE CUPRIC SOLUTION.

℞. Cupric sulphate..... ʒj
Glycerine..... fʒj

To make the test add five drops of this solution to one drachm of liquor potassæ, in a test-tube. Boil a few minutes to test the purity of the fluid; should it remain clear then add a few drops of the urine. If glucose be present in quantity there is at once thrown down a red precipitate, just as in the ordinary Fehling's test. To detect minute amounts of sugar, not shown by above procedure, after making the test as above, add half a drachm of urine, boil and set aside. If sugar be present, even in very minute quantity, the liquor, as it cools, will turn to an olive green color and become turbid.—*The College and Clinical Record*, April 1, 1886.

THE METALLIC SUTURE IN FRACTURE OF THE PATELLA.—At the close of a paper on this subject DR. FREDERIC S. DENNIS, of New York, draws the following conclusions:

First.—In compound fractures of the patella there is not the slightest question as to the propriety of the operation of wiring the fragments. Fowler's cases, James's, and my own, bear undisputed testimony in corroboration of this statement.

Second.—In recent and old fractures, with the full permission of the patient and under the strictest antiseptic precautions, the operation, in the light of present statistics, is wholly justifiable.

Third.—In debilitated patients, and in those suffering from any organic disease, the operation should not be employed, and is, in fact, contra-indicated, as all other operations of expediency.

Fourth.—It is not an operation which can be indiscriminately performed, and never by an ordinary practitioner with little surgical experience and with little faith in the germ-theory of inflammation.

Fifth.—The success of this operation depends wholly upon conscientiously carrying out the smallest detail in aseptic surgery, and the surgeon who is not imbued with the true spirit of antiseptic surgery is guilty of a criminal act toward humanity if he attempts this operation.

Sixth.—While the number of cases yet operated upon is too limited to admit of deductions by means of which a final settlement of this question can be made in the minds of surgeons, the future practice of the surgery of America, the birthplace of this operation, and the practice of other countries, will soon enable us to condemn it as an unsafe and unjustifiable procedure, or else it will raise it to a pinnacle from which we can recognize one of the grandest triumphs of our art.—*New York Medical Jour.*, April 10, 1886.

CHOLERA AND NEUROPARALYTIC KERATITIS.—The distinguished oculist, DR. AGUILAR Y BLANCH, contributes to the *Cronica Medica* of Valencia a paper on cholera and neuro-paralytic keratitis. His conclusions are these: 1. Cholera may give rise to a disturbance of the visual apparatus. 2. This is most apt to occur in the comatose form of the disease. 3. Children, and individuals with little organic resistance, are most affected. 4. The poor and ill-fed give the greatest contingent of patients. 5. The ocular affection is characterised by a neuro-paralytic keratitis. 6. In the majority of cases, both eyes are affected. 7. It follows the ordinary phases of this form, *i. e.* primary molecular mortification of whitish color, becoming yellowish, extending superficially rather than in depth, disintegration of the elements in its centre, perforation, hernia of the iris, total mortification of the corneæ, phlegmon of the eye. 8. The point affected is always the centre of the cornea, from whence it extends after previous infiltration. 9. The disease yields promptly, if taken in the early stage and with appropriate treatment. 10. The treatment consists in hot fomentations, bandage, eserine, iodoform, and tonics.—*London Medical Record*, March 15, 1886.

TREATMENT OF PERI-UTERINE HÆMATOCELE BY MEANS OF NEGATIVE GALVANO-PUNCTURE.—At a recent meeting of the *Association Française pour l' Avancement des Sciences*, APOSTOLI described this method as follows: The chemical-caustic action of the continuous current is utilized in making an opening into these tumors. The opening thus made is, in character, a non-retractile fistula, with tendency to remain open, and with adhesions between the pathological cavity and the external mucous membrane. The depth of the fistula varies with the intensity of the current strength. The advantage of this method is that, on account of the adhesions formed, the danger of opening is lessened, and the cicatrix left by the negative eschar is slight and non-contractile. A further after-effect of this method of utilizing the chemical caustic action of this current is that the nutrition of these pathological cavities is modified, leading to rapid retrograde metamorphosis. Apostoli has treated one case by this method, and the excellent result obtained leads him to the following general conclusions: The method is safe, quick in action, and modifies the usual prognosis. The method is, in action, double—it has a surgical effect and a medical effect. It is applicable alike to hæmatocele, abscess, fibromata, interstitial myomata, extrauterine cysts.—*American Journal of Obstetrics*, April, 1886.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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Address
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS.

SATURDAY, APRIL 24, 1886.

THE PHYSICIAN AND HIS CULTURE.

An English contemporary, in a recent note under this title, quotes Sir Robert Christison as an authority that Latin and Greek cannot be dispensed with in the education of one who hopes to be a successful physician, and that medical nomenclature, so largely of Greek and Latin derivation, cannot dispense with the ancient languages and rely upon Saxon words; and few, we think, will take exception to these propositions. Just how well versed in the classics the physician should be, however, is a point which Sir Robert does not discuss; nor will we until something has been said regarding other matters relating to the general and special culture of professional men.

Culture has been well defined as that knowledge or training which is essential to, at least, a provisional completeness of human nature; and a large part of it consists in having a due appreciation of the extent and importance of those fields or branches of knowledge which we cannot make our own, being outside of our profession or line of work. Students of a learned profession who delve in outside fields acknowledge, consciously or unconsciously, the law of alternation and remission of activity. Sleep, of course, is the only entire and absolute cessation of activity, and if we may believe that there can be sleep without dreaming, this is the most complete cessation. During the waking hours the most complete diversion is afforded by our meals, during which, if we do not eat alone, the trains of thought are changed while the body is rested. So also of bodily and muscular exercise; and Mr. Gladstone's *penchant* for wood-chopping, so far from being a vagary or denoting eccentricity, is simply the wise recognition and following out of a physiological law. But aside from this, What is gained by alternation of activities, by dropping one form of mental work and taking up another? The first consideration is that in order to derive benefit from it the first form of activity must not have produced exhaustion; and exhaustion is shown when, on taking up a new form of activity, the mind continues to run in the old channels. The taking up of another form of activity may be really a remission of intellectual strain. It is not necessary to be idle to rest the brain; on the contrary, it is generally better to take up an amusing and lighter occupation than to be entirely idle. The "rest, that strengthens unto virtuous deeds" is, then, not the rest of idlenesss; a fact recognized by Cowper when he says

> "Absence of occupation is not rest
> A mind quite vacant is a mind distress'd."

Obviously, our word culture may relate either to something acquired by the youth before entering upon the study and practice of his profession, or to some subject in which the practising physician becomes interested and learned or skilled—and we may very properly designate these as involuntary and voluntary culture. Of these the latter is usually more complete, and generally, though not necessarily, more useful. When acquired by professional men it is usually gained while in pursuit of mental relaxation, which is so necessary to those who do faithful work in their chosen fields. "Do you imagine," says Cicero, "that I could bear up against such a strain if I did not relieve it (the mind) occasionally by philosophical inquiries?" The actions, if not the words, of learned men of almost all ages have borne out this idea. We see the Premier of a great nation turning aside temporarily from the cares of State to write forcibly and learnedly of philosophical and historical matters: A surgeon lays away the scalpel to investigate principles of combustion. Egorovitch Min takes refuge from professional cares in language studies and leaves the literature of his country in debt to him when he dies. It is easily seen that these are not isolated cases; on the contrary, it seems to be the rule with the most diligent workers in any department to have some outside study for the relaxation, conscious or unconscious, and amusement which it gives. It is not the indulgence of idleness, for men who work cannot enjoy absolute inactivity, nor can they be inactive. We may paraphrase the saying of Euripides, "there is no one who seeks to live in pleasure that has reached fame," by "there is no one who reaches fame that can live in pleasure; man must labor;" if by pleasure he meant inactivity, idleness or ease.

That no absolute rule can be laid down for all men

as regards the different side studies by which the mind may be relaxed, rested, and at the same time fertilized, goes without saying. The most that can be said may be given in Bain's words: "The kind of change that may take place within the field of study itself, and that may operate both as a relief from strain and as a reclamation of waste ground, is best exemplified in such matters as these:—In the act of learning generally there is a two-fold attitude—observing what is to be done, and doing it. In verbal exercises we first listen and then repeat; in handicraft, we look at the model, and then reproduce it. Now the proportioning of the two attitudes is a matter of economical adjustment." Too much observing impairs the energy for action. Working from a model gives the proper adjustment between observing and doing. One of the most marked contrasts, and a most grateful change, is the passing from the study of science to that of language. The transition from one department of science to another is often a most grateful relaxation. The change from one language to another is a real, though not a very marked relief, save when it is made from the less to the better known. The study of the fine arts brings distinctive organs into use, and has to many a pleasurable interest not usually possessed by other studies. Many of the "outside studies" have a very direct bearing on medicine: modern languages, biology, zoology, physiological chemistry, drawing and modeling may be mentioned as the more important in this connection. When properly undertaken these studies constitute something more than mere amusement, as indeed may be said of any side study. Very valuable work has been done during excursions into other fields than the chosen profession, as witness the work of James Veitch, the plow-maker, in optics; and, we may add, his discovery of David Brewster, who, in turn, did most excellent philosophical work while yet a minister. The same is true of Priestley. In these two cases, however, the side study took "the expulsive power of a new affection."

The study of foreign languages is of great importance to the physician, even though he may have no taste for general literature. In very many cases there is no necessity for a teacher, and time and opportunity may be wanting to attend a regular class. By subscribing for a medical journal and buying a grammar and dictionary of the language to be studied, one may by a little earnest work each day soon acquire sufficient familiarity with the language to read it readily. Some have questioned the value of biology to medical men—the logical connection between the purely scientific doctrine of disease and biology. The answer given by Mr. Huxley is sufficiently clear: "Living matter is characterized by its innate tendency to exhibit a definite series of the morphological and physiological phenomena which constitute organization and life. Given a certain range of conditions, and these phenomena remain the same, within narrow limits, for each kind of living thing. They furnish the normal and typical character of the species, and as such, they are the subject-matter of ordinary biology . . . . pathology is a branch of biology; it is the morphology, the physiology, the distribution, the ætiology of abnormal life."

The practical study of physiological chemistry, while not a purely side study, may also be mentioned. Very valuable work in this field has been done by physicians in active practice. Of the study of the fine arts, including modeling, it may be said that they not only possess a rare interest, but a knowledge of drawing and modeling is of very great practical value to the doctor. They are much more cultivated abroad than in America. We cannot expect that every doctor may become an artist or a sculptor, but there are very few who cannot learn to draw a good figure, or to make a fair model of a diseased or malformed part. A practical knowledge of mechanics is also of value. Mechanical and physical principles are constantly coming up in medicine. It is not necessary that the doctor should be able to make a steam-engine, but so much the better if he can. This knowledge is especially valuable to the surgeon, and to that man of (usually) so many resources, the country doctor.

We have already signified our agreement with Sir Robert Christison, and the *Lancet*, that the Greek and Latin derivatives cannot be superseded in medical nomenclature. The truth of this is apparent on a very superficial examination, though not because some one says it in an autobiography. Ichthyosis is in every way preferable to any Saxon name that can be used for it. This, however, would not justify the assertion that one who is even a master of the Greek language would know, by the etymology alone, what ichthyosis is or means. The chief merit of this nomenclature is that it may be used by writers in all languages; whereas if we had a Saxon term, the German writers would have a German term, the French a French term, and so on to the end of the chapter. The fact is, too much of this is now done, especially by foreign writers. Our French and Italian *confrères*, especially, seem to have a special aversion to the use of scientific terms. But as regards Sir Robert Christison's saying of Latin and Greek, "that of all the studies suitable for boyhood there is no other which is so likely to

strengthen the memory, imagination, attention, and judgment, so certain to instil taste, so useful for imperceptibly infusing an accurate and ready use of English, or so indispensable as the groundwork for acquiring modern tongues," it is only necessary to say that it shows a want of knowledge of the mental processes involved in studying any subject; and, further, of the family relationships of some of the modern languages. It is a mistake to attempt to prove something by quoting what some one says of it.

THE PAPERS AND THE DISCUSSIONS ON PAPERS READ BEFORE THE ASSOCIATION.

In view of the facts that the discussions on papers read before societies are often as valuable as the papers, and that those who engage in the discussions frequently complain of the manner in which their remarks are reported, it seems desirable that each one discussing a paper should write out his intended remarks previous to the reading of the paper, and amend them afterwards if necessary, or else should write them out in full as soon after the discussion as possible. When possible the remarks should be written out in ink, the pages properly numbered, with the *name* of the reader of the paper, the *title* of the paper, and the *name* and *address* of the speaker on the first page.

It would seem unnecessary to call attention to the fact that the reader of a paper should put his *name* and *address* on the paper, with the date on which it is read, and whether read by title or in a Section. One or more papers read at the last annual meeting of the Association were sent to THE JOURNAL with no clue whatever as to the author. When papers are written in parts, each part should be distinctly marked. Neglect of this precaution last year caused a valuable paper to be printed second part first, since there was nothing, in the subject-matter of the parts, which indicated which should have precedence. Each illustration for a paper should have the name of the author upon it, and each one should be numbered. If one author have more than one illustrated paper, a part of the title of the paper to which it belongs should be also placed on the illustration.

We would again remind members of the Association that all addresses, papers, and discussions are the exclusive property of the Association, and should be delivered to the Permanent Secretary or to the Secretary of the Section in which they are read during the meeting of the Association. The rule on this subject is explicit, and having been adopted by the Association is binding upon each member.

A NEW TEST OF MEDICAL COLLEGE STANDING.

The Illinois State Board of Health held its regular quarterly meeting in Chicago, commencing April 15, 1886. From a brief report of its doings in the *Chicago Herald* of the 16th we clip the following: "Those present were: Drs. Bateman, Clark, Ludlam, Rauch and MacKenzie. A resolution was passed to the effect that the continuous graduation of 45 per cent. of the total number of matriculates of a medical college—due allowance being made for the average annual loss—must be accepted as *prima facie* evidence that practically every candidate is graduated without regard to competency or qualification; that it be resolved that no medical college be recognized as in good standing within the meaning and intent of the act to regulate the practice of medicine in the State of Illinois, the aggregate graduates of which amount to 45 per cent. of its aggregate matriculates during a period of five years ending with any session subsequent to the session of 1885–86."

From this it appears that any person who hereafter presents a diploma to the Illinois State Board of Health to procure a license to practice in that State, must accompany it with proof that the college granting the diploma had not during the five years preceding the date of said diploma graduated an average of 45 per cent. of the whole number of its matriculates. Or will the Illinois State Board of Health add to the list of requirements that all medical colleges must comply with in order to be recognized as in "good standing," another, requiring the Dean or Secretary of every medical college in this country to furnish the Secretary of the Board, annually, a sworn statement of the actual matriculates and graduates under penalty of forfeiting the "good standing" of the college if he refuses or omits to comply? Only a few months since, Judge McAllister, in rendering a decision of the Appellate Court in this city, declared very distinctly that the Illinois State Board of Health was an executive body simply, with no legislative functions, more especially in regard to medical colleges. But nevertheless, the Board continues to perform the double duty of both making and executing laws. This last act of legislation may be found rather difficult of execution. It may be found quite as easy for a medical college to add to the published list of its classes enough names to keep the list of their graduates from exceeding 44 per cent., as it is for it to insert a clause in its announcements saying that a certain amount of general education will be required for admission whether any attention is ever given to its execution or not.

STROPHANTHUS.

The physicians in this country who have made unsuccessful attempts to obtain specimens of this drug will be pleased to learn that a tincture, prepared by the method and of the strength recommended by Professor Fraser, is now made by MM. Burroughs and Welcome, Snow Hill Buildings, London, E. C. The *British Medical Journal* describes it as a clear, dark amber-colored fluid, miscible with water in all proportions, and yielding an opalescent solution. It can be dispensed with acids or alkalies, and does not change color with perchloride of iron. Its chief drawback is its intensely bitter taste, but it is seen that it has pharmacopœial advantages over tincture of digitalis.

EPIDEMIC CHOLERA.—As the warm season advances in the south of Europe, indications of the spread of cholera are again attracting attention. A despatch dated Paris, April 16, states that sixty-eight cases had occurred in Brindisi, Italy, and that sixteen deaths had taken place between the 8th and the 16th inst. It is reported that very stringent precautions are being taken to prevent its crossing the frontiers of both France and Austria. Still, the officials of Brindisi claim that the disease is sporadic.

SOCIETY PROCEEDINGS.

GYNÆCOLOGICAL SOCIETY OF BOSTON.

Stated Meeting, March 11, 1886.

THE PRESIDENT, HENRY O. MARCY, M.D., IN THE CHAIR.

H. J. HARRIMAN, M.D., SECRETARY.

The records of the February meeting were read and approved.

DR. R. J. P. GOODWIN, of East Boston, and DR. W. THORNTON PARKER, of Newport, R. I., were

ELECTED TO ACTIVE MEMBERSHIP.

DR. H. M. FIELD then presented a report of

A CASE OF INVERSION OF THE UTERUS, FOLLOWING UPON PARTURITION.

Mrs. J. W. B., 25 years of age, was confined with her first child on February 7, with a tedious and rather severe labor of twenty-eight hours. Delay had been chiefly caused by a rigid os. Fifteen hours before the birth a two-gallon douche of hot water was administered, but had no effect. Dr. Field could remember but one previous instance in which this measure had failed to hasten dilatation of the os. No anæsthetics were used. An attempt to administer chloral hydrate by mouth and rectum was unsuccessful. An occasional suppository of morphine and belladonna worked admirably. Thenceforth for nine hours progress was slow, the diameter of the uterine orifice being but little increased. A second hot douche was administered, and the hard, cartilaginous ring of the os at once began to relax, and the labor proceeded steadily until the birth of the child, three hours afterwards.

At once, upon extrusion of the head, ʒiij of fluid extract of ergot were administered. The fundus uteri was followed down by the left hand and, immediately after the birth of the child, Credé's method of expelling the placenta was applied; cautious and tentative traction being at the same time made upon the cord. Almost at once the patient uttered some exclamation, and it was discovered that both uterus and placenta were in the bed, the one organ so adherent to the other that it was difficult to determine the line of division. The placenta having been removed the uterus was reposited without much effort by steady and increasing pressure of the four fingers upon the fundus, the thumb lying upon the palm. The hand was retained *in utero* for a little while to ensure continued contraction, and also to ascertain if any shreds of placental tissue still remained in the cavity. On turning the attention to the patient it was discovered that the abdomen was so distended with gas that it was difficult to feel the womb in its cavity. The change in facial expression was sudden and very marked. The young and beautiful face which just before had been full of blood suddenly became pinched and haggard, and the color a blueish-white. Although everything proceeded favorably in the future progress of the case, it required nearly a week for a look thus suddenly assumed to pass entirely away. This, doubtless, represented shock. No hæmorrhage occurred, and the patient recovered without any untoward symptoms.

Dr. Henry E. Crampton, of New York, in an admirable monograph upon "Inversion of the Uterus, following upon Parturition," published in the *American Journal of Obstetrics*, has given the literature of the subject. The present case well illustrates the following remark: "Shock is rarely absent. There is a peculiar anxious expression and manner. Every movement shows how profoundly the whole nervous system sympathizes with the terrible dislocation." In regard to traction upon the cords as a cause of inversion, Dr. Crampton says: "Traction upon the cord may produce prolapsus; if severe, procedentia. It will never alone produce inversion, but may facilitate it if paresis is present." It is most apt to occur in first deliveries, and is referable to a degree of paralysis in the uterine muscle, brought about by a tedious and exhausting labor. Death ensues in about twenty per cent. of recent cases, whatever the treatment. A visit to Mrs. B. four weeks after delivery found her well. No irregularity in function of either uterus or bladder. Uterus in its normal position.

Dr. Field closed with some remarks upon the parturient use of chloral hydrate. His experience has lead him to entertain a very favorable opinion of the drug, *i.e.*, so far as he has been able to secure the

results which belong to the remedy. He called attention to an unfavorable opinion of the drug expressed by Dr. A. Pinard, of Paris, who has abandoned it on account of the difficulty in procuring its retention and absorption. This difficulty, he insists, is equally great whether exhibited by mouth or rectum. If given by mouth the bulky and irritating potions, several times repeated, are apt to induce vomiting and thereby unfit the stomach for food, stimulants or medicine. If given by rectum there is still greater liability that it will be discharged before it can be absorbed.

Dr. Field also reported a

CASE OF PROFUSE ANTE-PARTUM HÆMORRHAGE; PARTURITION; DEATH.

Mrs. J. H. L., 28 years of age, was confined at full term on January 27. She had had three previous confinements. Oldest child 8 years old; youngest, 18 months. No previous complication in parturition except a case of hour-glass contraction at birth of first child. Mrs. L. was of strong physique, cheerful disposition, and had had every alleviation which money could provide. Her last conception occurred while she was still nursing. During later months of gestation she had been under observation on account of slight bloating and a trace of albumen in the urine.

On February 27 Dr. Field was summoned in haste and found patient lying in bed, very pale and evidently much frightened. The pupil was so dilated that her blue eyes looked black. She had had no pain, but an uneasy sensation called her to the water closet, when "something seemed to break inside," and a deluge of blood came away. There were no stains on the bed and no clots in the vagina. There was a slight and inconsiderable trickling of blood from the vulva. She had never seen a drop of blood until the sudden flooding. No parturient pain was present. A gr. ss suppository of morphine and a little iced brandy reassured her, the pupil returned to its normal size, and the pulse regained a fair degree of steadiness and force. Digital examination revealed an os dilated to the size of a quarter of a dollar, and the fœtal head high up. As the patient was not losing blood she was given a half hour's rest, material in the meantime being prepared for a tampon, should one be necessary. The working hypothesis at this time was that there existed a slight lateral cervical insertion of the placenta. In support of this it seemed to the examining finger as if a limited portion of the uterus just within the os felt a little thicker than neighboring parts, as if at this point the placenta might dip forward. It was decided to apply a tampon to prevent any possible recurrence of the dangerous flooding. Each pledget of cotton was dipped in undiluted Monsell's solution, and after being slightly oiled with cosmoline, was firmly packed in place. After the vagina had been firmly packed a bandage was applied to hold the tampon in place. At this time Dr. Stoddard, of Newtonville, saw the patient in consultation, and approved of the treatment in every particular.

After the tampon was applied ergot was given in frequent small doses, and soon labor pains set in. The tampon did not prevent a slight oozing of blood, but the amount lost from the time when Dr. Field first saw the case until he left the house was inconsiderable. Soon the tampon began to bulge with each pain, and a watery, grumous fluid to escape. The tampon was then removed, and the head was found to be engaged. The labor progressed rapidly and was terminated at 5.05 P.M. Ergot was used both by mouth and hypodermically, and the uterus contracted at once. The placenta, together with a large venous-looking clot, was at once expelled, and everything seemed to be looking well. Leaving a trusty nurse in charge of the uterus, half an hour was spent in fruitless efforts to resuscitate the fœtus. One hour after the birth of the child it became evident that the mother was losing ground, though the uterus was well contracted and no blood of any amount being lost. Resort was had to hypodermic brandy at frequent intervals. At first a slight response was noticed, but later there was no response whatever, and the lamentable case terminated by the death of the mother two hours and a half after the birth of the child.

It has been suggested that another method might have been adopted in the treatment of the case. Turning might have been done at once when Dr. Field was called to the patient. Had it been a case of central implantation of the placenta, or had the flooding still continued, such heroic treatment might have been indicated, but as the hæmorrhage was under complete control and there was no indication for speedy and forcible delivery, it was thought best to give the patient a chance to rally. She did rally to a good degree, and her labor was light and completed with little effort.

Dr. Field was disposed to believe that he underestimated the amount of blood the patient lost before he saw her. Again, an autopsy might have revealed some lesion or complication which could not have been disclosed otherwise. No autopsy was permitted. During the last hours of life, when the patient seemed to be sinking, Dr. Field explored the interior of the uterus. The organ was firmly contracted, but of rather abnormal size. This undue size was referable to the posterior wall of the organ, and it is possible that an autopsy might have revealed a disseminated interstitial fibroid tumor in that location.

Dr. Wm. G. Wheeler had had three cases of inversion of the uterus, and all recovered. Shock is generally prominent, but is not due to loss of blood. The uterus is readily replaced, but the pinched and haggard expression of the countenance is very marked, and does not disappear for several days. He thought that death in Dr. Field's second case might have been due to shock. If this was not the case there may have been some pathological condition of the uterus which produced this unfortunate result. Dr. Wheeler did not think that turning would have been advisable in this case.

Dr. Stoddard, who was the consultant in the second case, said that he did not see the patient until after the tampon was applied, and therefore did not have the advantage of an examination of the genital tract. Turning and rapid delivery was pro-

posed at his first visit to the patient, but as hæmorrhage was under complete control, and there was no marked indication for such heroic treatment, it was not done. He regarded the treatment of the case as judicious. He had never seen a case of inversion of the uterus.

DR. H. C. WHITE had never seen a case of inversion of the uterus. He thought that shock or some unknown factor must have been the cause of death in Dr. Field's second case.

DR. W. SYMINGTON BROWN had never seen a case of inversion. He did not think the second case described one of partial placenta prævia, but regarded it as more probable that it was a case of interstitial fibroid tumor. Monsell's solution is not, in his opinion, a suitable styptic for use where it is necessary to tampon the vagina, as it formed a hard, leathery clot. He generally uses boiling water, applied to the bleeding vessels by means of a dressing forceps and a sponge. When a styptic is required on a tampon Dr, Brown uses a weak solution of tincture of iodine, and has had good results from such use. It is important to combine nutrient materials, such as milk and beef tea, with stimulants where the latter remedies are required, in order that the strength of the patient may be maintained.

DR. W. THORNTON PARKER, of Newport, R. I., had been much interested in the cases reported. He raised the question whether death in the second case was not due to blood clot.

DR. C. W. STEVENS thought that transfusion was indicated in the second case when it was evident that the patient was sinking. His experience had led him to believe that when the system was suffering from shock, absorption, either by mouth or subcutaneous tissue, was in abeyance, and that the only hope lay in throwing directly into the circulation some material suitable to support the powers of life.

DR. A. L. NORRIS had seen but one case of partial inversion of the uterus. In the second case reported he thought there must have been some unknown factor in producing death, such as interstitial fibroids. He regarded the treatment of the case as entirely correct, and did not think that turning was admissible.

DR. N. O. B. WINGATE had seen no cases of inversion. He thought that internal hæmorrhage may have been the cause of death in Dr. Field's second case. He related a case of sudden death soon after delivery which occurred in his own practice. His patient was a large and strong woman, and had been in labor twelve hours. She suddenly began to sink, and delivery was hastened by using the forceps, no anæsthetics being used. A child weighing 17½ lbs. was delivered without very much difficulty. The mother rallied well, and everything seemed to be progressing finely. After reaching home he was hurriedly called again and found his patient dead. The nurse reported that she gasped a few times and died very suddenly. Dr. Wingate thought death in this case due to heart clot.

DR. HARBIRD asked Dr. Field in regard to the amount of ergot given in his second case before the birth of the head. He thought that there might have existed a rupture of the uterus which escaped notice but caused death. He doubted if the loss of blood caused death, as in many cases it is known that the loss of blood may be very great and yet not destroy life.

DR. E. W. CUSHING asked if much hæmorrhage followed peeling off the placenta in the case of inversion. A discussion had recently arisen in a medical society as to whether it was best to try to separate the placenta from the uterus while it was extruded, or to replace the uterus and then remove the placenta, the theory being that serious hæmorrhage would follow its removal when the uterus was inverted. Dr. Cushing said that transfusion was likely to be a disappointing measure in such cases as Dr. Field's second case. It was no easy operation to perform, and even if successfully accomplished did not often succeed in averting a fatal issue. He mentioned the case of a strong and robust man in which transfusion was tried for excessive hæmorrhage from the temporal artery. Although the case was a favorable one and the operation was successfully performed, the patient sank and died. Dr. Cushing thought there was a cause of death in such cases which might be overlooked, *i.e.*, the gradual formation of a clot in the venous system, beginning at the periphery, and gradually increasing until it interferes with the action of the heart or lungs. Œdema of the lungs may be due to this cause.

DR. WHITCOMB asked if chloral hydrate could be used hypodermically. He also raised the question if an idiosyncrasy to ergot did not exist in Dr. Field's second case.

In reply to queries made by different members during the discussion, DR. FIELD made the following statements: Milk or other nutrient material had not been combined with the brandy on account of constant nausea. He did not think that death could have been due to heart clot, as there were no symptoms present which could support such an hypothesis. He was of the opinion that transfusion was indicated, and would have tried that means had he had the time and necessary apparatus. The amount of ergot given in the second case before the birth of the head was about 3j in divided doses. He knew no evidence to prove that such doses of ergot ever produced toxic effects. He did not think that an idiosyncrasy to ergot existed in the case. Chloral hydrate could not be administered hypodermically on account of its irritating qualities. No hæmorrhage of importance followed peeling off the placenta in the case of inversion.

DR. MARCY, in commenting upon Dr. Field's case, suggested a method of intravenous injection which he had used quite a number of times with ease and success, and which had never been reported. It was the result of many experiments in injection of animals for anatomical purposes under continuous atmospheric pressure. Milk is drawn directly from the animal through antiseptic gauze into an aseptically prepared bottle of considerable size—one holding thirty to forty ounces preferred—and the rubber stopper of the aspirator adjusted. By reversal of the instrument, the air in the bottle is compressed, and

the bottle, held cork down, is ready for use. The No. 1 or 2 aspirator needle is easily introduced into the median cephalic vein without cutting, and when the end is free in the vein the connection with the bottle is made, first letting a little milk escape to ensure absence of air. The intravenous injection of milk or saline fluids is thus simple and easy, and with proper care may be rendered aseptic. Transfusion mediate or immediate is not easy or simple. The dissection of a vein and introduction and tying of a canula in a patient nearly bloodless, perhaps dying, is difficult, and the Aveling instrument, with Dr. Marcy, had been very unsatisfactory even in a series of experiments upon dogs conducted with great care. The aspirator is now a part of the armamentarium of every physician, and by its use as suggested we have at hand a ready and easy method of adding fluid to the circulation which may save life.

In reply to the question as to the advantages which Dr. Marcy had seen coming from intravenous injection, he replied that he believed in all the instances used the patients have ultimately died, but good effects followed temporarily from the injections. They had been used only in desperate cases, and he believed they should be resorted to earlier and oftener than usual. Dr. F. B. Harrington, of Boston, published in the *Boston Medical and Surgical Journal*, of March 4, a case in which sixty-six ounces of a salt solution had been used after a most alarming flooding, and the inference seemed clear that recovery was dependent upon its use. Dr. Marcy had never injected more than ten or twelve ounces of milk at one time; decided improvement of the circulation had followed after the use of six or eight ounces.

DR. MARCY presented an

INTERSTITIAL MULTILOBULAR FIBROID TUMOR

which he had recently removed at his private hospital, assisted by Dr. Cushing, Dr. Corey, of Westboro, and Dr. Goodwin, of East Boston. The patient, aged 53, had passed the menopause some years ago, and only within a few months had in any way been a sufferer. Excessive and continuous flowing caused her to consult Dr. Corey. The tumor reached nearly to the umbilicus and was situated in the anterior wall of the uterus. The cervix was obliterated and the os admitted the finger. The uterine wall over the tumor was about one-third of an inch in thickness and bled profusely on section, after which the hæmorrhage was slight during the operation. Strong vulsellum forceps were hooked into the tumor, and it was cut away piecemeal, the saw-spoon being used in separating the growth from its investing capsule. It was removed in fourteen sections, and the entire mass weighed four pounds. The operation was conducted under irrigation with a solution of mercuric bichloride, and the cavity filled with Seabury & Johnson's soft iodoform gauze.

The patient rallied well, and during the ten days following operation pulse was nearly normal, after a reaction to temperature of 100 twelve hours after the operation. Without permission the patient walked about her room, during the absence of the nurse, on the tenth day, and a severe perimetritis supervened; recovery from this was less rapid and the patient was discharged convalescent between the fourth and fifth week.

The interest in the operation centres in the size of the growth, since it is very rarely that tumors of this size have been removed per vaginam. Rapidly growing fibroids are also rare after the menopause.

FOREIGN CORRESPONDENCE

LETTER FROM PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Congress of Hydrology and Climatology—Changes in the Pupil after Death—Hydatid Cysts of the Liver—Cardiac Stimulants—New Test for Codeine.

The first International Congress of Hydrology and Climatology will be held at Biarritz, the 1st of October, 1886, under the honorary patronage of the French Minister of Commerce, and the presidence of Dr. Durand-Fardel, the well known hydrologist. The programme states that the aim of this Congress is to bring together in a country rich in thermal and sanitary stations, the learned men of all countries who would study in common the questions bearing on hydrology and climatology. All societies and scientific associations, all learned men in France and abroad are invited to take part in this meeting. Any person wishing to join the Congress must send in his application enclosing a postoffice order for ten shillings, which must reach Paris by the 1st of September at latest in order to entitle the members to a reduction of fifty per cent. on the French railways. They will also enjoy other privileges which are detailed in the programme, which may be obtained from Dr. Durand-Fardel, 17 Rue de Guénégaud, Paris, who will be glad to furnish any other information that may be required concerning the Congress.

The *Gazette des Hôpitaux* lately published the following interesting points on the alterations that the pupil undergoes after death, and on the action of atropine and of other alkaloids on the eye of a corpse. In the greater number of cases, the pupils are dilated at the moment of death. The dilatation takes place a very short time before the person has expired. It is produced very rarely a short time after death. The dilatation is of a paralytic nature, and independent of the aspect that it presented during life, whether it was produced by the effects of drugs or by disease. More frequently, after death, a progressive contraction of the pupil is observed, varying within rather extensive limits, both as regards the moment of its appearance and the degrees of the contraction. This contraction ordinarily commences an hour after death and continues forty-eight hours afterwards. The myosis, often unequal on both sides, is independent of the action of light and of cadaveric rigidity. The pupil reacts, under the influence of atropine, after death, during a variable time according to the subjects; nearly about four hours when the instillation of atropine is employed; during a longer time, when atropine is injected into

the anterior chamber. Dilatation commences sensibly after the same time, on the dead as well as on the living eye; the action is less durable than in the dead eye. The instillation or injection of eserine, after death, produces contraction of the pupil, but for a shorter time than the dilatation which is produced by atropine. Instillations of ergotine, after death, produce no change whatever of the pupil; an injection of this substance into the tissue of the iris, or into the anterior chamber, produce a myosis of two hours' duration. Pilocarpine has a weak myotic action on the eye after death.

In a very interesting paper on the treatment of *Hydatid Cysts of the Liver*, Dr. L. G. Richelot, son of the present editor of the *Union Médicale*, lately published a paper in that journal on the subject. He recommends the use of the aspiratory puncture, if only as a means of diagnosis. The cyst should be entirely emptied to prevent effusion into the peritoneum. In spite of all precautions, the liquid is reproduced, and it is only in exceptional cases that a complete cure is effected by the operation. In the majority of cases, however, a relapse is the rule, after one or two punctures, the cyst suppurates, and then, in the event of a return of the disease, a free incision should be resorted to, instead of employing the aspirator, as the repeated use of the latter is not always inoffensive.

The ostensible object of the aspirator or the employment of a free incision is to avoid the necessity of making an opening into the peritoneal cavity, but Dr. Richelot is of opinion that this would be only tampering with the malady and losing valuable time. He therefore recommends that at the very commencement, and when the diagnosis of a hydatid cyst of the liver has been established, a free incision into the peritoneum should be practised, employing at the same time the usual necessary precautions. By this means the surgeon is enabled to examine the tumor more completely, and to decide as to the proper subsequent treatment that should be adopted. When it is decided to cut through the peritoneum, Dr. Richelot adopts the method of Volkmann; that is to say, a modified laparotomy, which is an operation not dangerous in itself, and it has the advantage of enabling the surgeon to see what he is doing.

The author concludes his paper by laying down certain rules for the treatment of hydatid cysts of the liver which have returned after the capillary puncture: 1. Free incision of the peritoneum with antiseptic precautions. 2. Exploration of the tumor. 3. Treatment of the cyst appropriate to its size and its connections.

In a memoir by Dr. Durand, of Lille, on *Cardiac Stimulants*, and to which a prize has been awarded by the Catholic Faculty of that city, the author gives some valuable information on adonidine, and compares its action with that of other drugs, such as digitalis, convallaria, and caffeine. According to the author, adonidine acts on the heart somewhat like digitalis, but it possesses no cumulative properties; its diuretic effects are very marked, and it can be used for a long time without causing any symptoms of intolerance. It should be given at a dose of 2 centigrammes; when the beats of the heart are irregular or unequal, digitalis is the best remedy, and adonidine is much less useful. On the other hand, the latter gives good results in all cases where the arterial tension is too low. As a diuretic, caffeine is to be preferred.

M. Lafon describes, in a paper read by him at the Academy of Sciences, a *New Test for Codeine*, as follows: If a trace of codeine be mixed with a solution of one gramme of ammonium selenite in twenty cubic centimetres of sulphuric acid, a beautiful green color is obtained, which gradually changes by oxidation to a reddish brown; one milligramme of codeine can be detected in this way. The reaction is not yielded by any other active principle, alkaloid or glucoside, except morphine. A. B.

DOMESTIC CORRESPONDENCE

CARBOLIC ACID INJECTIONS IN CARBUNCLE.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—In the number of THE JOURNAL for February 13, 1886, page 185, I noticed quotations from an article in the *Texas Medical Journal*, of November, 1885, in which Dr. Wilkinson, of Galveston, states that for the last six or eight years he has used carbolic acid by injection in the treatment of carbuncle. In connection with his suggestion I deem it proper to note the fact that in the *Toledo Medical and Surgical Journal*, for 1880, I published an article on this subject, of which the following extract is the conclusion:

"It is now about two years and a half since a patient presented with two carbuncles, one on the back of the head, the other below it on the neck. They were of moderate size only, the upper being open in three places, while in the lower the skin was unbroken.

"Having considered the various known properties of carbolic acid, I determined to use it in the sinuses of the upper carbuncle, and to use it vigorously. Loading my hypodermic syringe and passing the point through the opening and into the sloughing mass in every direction, I completely saturated it with the pure acid, and awaited results. In a minute the smarting disappeared, and with it all pain and sense of soreness.

"By this result emboldened, I again charged the instrument and thrusting it through the skin over the other carbuncle in a variety of places, I soaked the whole mass beneath the skin, enough of necessity escaping to fully bathe the borders, modify inflammation and destroy any septic elements there developed. I waited not without concern, and was delighted to learn in a few moments that all pain and soreness was gone in this also. The skin over the mass became quickly white, hard and dead, in a few days detaching in the form of slough; the interior mass also becoming loosened and only requiring the cutting of a few shreds to remove it, when the cavity was found to present a satisfactory appearance, and rapidly filling up left an exceedingly small cicatrix.

"The remarkable feature in this case was that after

the complete saturation of the carbunculous mass, no pain occurred, my patient going about his ordinary labor without discomfort. It is now but a year since I treated another case in a similar manner, with similar results, the party suffering no pain or even soreness after the lapse of one minute following the injection.

"In making this suggestion, which so far as I know is new, I am conscious of the insufficiency of my cases, but I am so sure of its efficiency that I shall at once resort to it when case and occasion offer, and advise others to do so, at least until the value of the measure is determined. In conclusion, I would advise the use of pure acid only, and to complete saturation; dilution would increase, if not create, danger of absorption, converting a very simple procedure into one of great danger, and being insufficient, defeat the purpose for which it is used."

Since writing the above, experience has fully confirmed me in the correctness of all set forth, and I had come to regard it as an important fact and congratulated myself that I had at least, as a prior observer, given this much to my profession. I care little about that point, however, but still think that I may claim that much. But whoever was the first, it was independently used by me in the office in which I write this note, with some misgivings as to consequences. Double discoveries are always possible, but in my case they have been quite striking. I supposed myself to be the first to use the continuous pressure of rubber in chronic orchitis, applying the common rubber capote. I also made from a pair of pruning shears the first costatome of which I ever heard, and that, too, long before any note of them appeared in the illustrated circulars of instrument manufacturers; and invented and had made a device by which the piston-head in a syringe cylinder can be made larger and smaller at will without removal from the barrel. These devices I showed freely to many traveling men and others, and soon the back counties were heard from. Some fellow patented the syringe device, and it is now manufactured by Lutz, of Indianapolis, and offered to the profession with a flourish of trumpets as to its merits. I have in my possession the original instrument, made years before the issuance of the patent, the merit of invention having been coolly filched from me.

Truly yours, J. T. Woods, M.D.

Toledo, Ohio, February 28, 1886.

TREATMENT OF CARBUNCLE.

To the Editor of the Journal:

Dear Sir:—Your editorial remarks in The Journal of February 13, 1886, in regard to the treatment of carbuncle by the injection of carbolic acid, full strength, as suggested by C. H. Wilkinson, M.D., in *Daniel's Medical Journal* for November, 1885, p. 15, are timely, and the benefit of the treatment is confirmed by the success I have attained in the several cases in which I have used it. A few facts in regard to my methods, additional to the carbolic acid treatment, may not be out of place. I invariably test the urine for sugar when first undertaking the treatment of a patient for carbuncle. If sugar be present, I put the patient on strict diabetic diet, and prescribe bromide of arsenic, three drops, twice a day, and inject the sinuses of the carbuncle with carbolic acid, full strength. If I do not find sugar in the urine I conclude, as to the etiology of the disease, that it is the retention in the alimentary canal of excrementitious matter and the consequent poisoning of the system. The diet is temporarily restricted, and cathartics administered until the stomach and bowels are thoroughly unloaded; after which I give:

℞. Permanganate of potash..... .. gr. ss.
Water..... ℥ij.
M. Sig. At once.

and repeat the dose until I am satisfied that the alimentary canal is thoroughly disinfected. I have never failed to cure carbuncle by this method; and thus far have not had a recurrence of the disease in a single case. The following are the only cases I will claim space to report:

Case 1.—Mrs. McC., about 43 years of age, white, married, and the mother of one child. She is of fine physique and generally good health. She had suffered from carbuncle for a number of months, and had submitted to various methods of treatment, and about as soon as one carbuncle was cured, another made its appearance. Each successive carbuncle appeared a little higher up the back, the last one being near the nape of the neck. It was about three inches in diameter and had two sinuses. The test of urine for sugar gave negative results. I administered brisk cathartics and then gave permanganate of potash, and refused to cut the carbuncle. In a few days she was well; and there has been no recurrence of the disease after the lapse of a year.

Case 2.—On February 12, 1886, James Owens applied to me for treatment of carbuncle. He was about 40 years of age, white, a native of Texas, unmarried, and a farmer. The carbuncle was situated on the back, in the lumbar region and near the mesal line, and was three and one-half inches in diameter. There were three deep sinuses, and the parts were highly inflamed and painful. He had lost flesh, had no appetite, and complained of giddiness. I injected carbolic acid deeply into all three sinuses, gave him cathartics and followed them with permanganate of potash. In a few days he reported himself well.

I am convinced of the beneficent effects of the carbolic acid treatment; but to insure a non-return of the malady, I am equally convinced of the necessity of disinfecting the alimentary canal, where sugar in the urine is not found among the etiological factors.

I am, very truly, J. W. Carhart, M.D.

Lampasas, Texas.

THE MECHANICAL TREATMENT OF THE VOMITING OF PREGNANCY.

To the Editor of the Journal:

Dear Sir:—In Dr. Joseph Taber Johnson's paper, read before the Medical Society of the District of Columbia, and published in The Journal of March 13, he says, on page 288: "In the *London Lancet*,

for February, 1878, Dr. M. O. Jones, of Chicago (who now resides in Pittsburgh, Pa.), published a paper on 'Vomiting of Pregnancy,' and advocated in certain cases the local application of the nitrate of silver to the os uteri as a cure. This mode of treatment *could not have originated* with Dr. Jones, as Dr. Marion Sims reported a case a number of years prior to Jones's paper "in which he cured a noble lady of Paris who had been given over to die by a number of eminent physicians, who had religious scruples against the induction of abortion. Sims reports that from the first application the relief was marked, and in a few days she was completely cured. The recovery was heralded as little less than a miracle."

Dr. J. Taber Johnson *could not have* read the paper mentioned, else he *would not* have fallen into an error. If Dr. Johnson will refer to a number of the *Lancet*, of February, 1878, containing my paper, or to the American reprint of the *Lancet*, May, 1878, he will find what Dr. Sims wrote upon the subject in his notes of a case appended to my paper. His preliminary remarks to, and the closing paragraph of his notes, I will quote in full:

"*Notes of a Case by Marion Sims.*—I had the good fortune to meet Dr. Jones, of Chicago, last June (1877), when he incidentally related to me his experience in the treatment of the vomiting of pregnancy. I thought the matter of so much importance that I begged him to write it out for publication. Accordingly he sent me the foregoing paper, which I received just as I was leaving home, and not having time to arrange for its publication then, I now send it to *The Lancet*. I am not in the way of seeing much of this affection, but a case came under my observation a *few days* ago so strongly confirmatory of Dr. Jones's views, that I take the liberty of appending it to *his paper*. After relating the case he closes by saying: 'If Dr. Jones's treatment acts as promptly in all other cases as it did in mine, the profession will certainly feel grateful to him for it.'"

Dr. Johnson, after referring to Dr. Sims's case, says: "I have had one such case, and was greatly surprised by my perfect success in curing a patient who had been confined to bed for two weeks. . . . . The efforts to vomit continued and were not relieved until the nitrate of silver was applied. She immediately became better, and the vomiting soon stopped, and she finally gave birth to a fine healthy child." I am glad to learn of Dr. Johnson's successful treatment of a case of vomiting in pregnancy by the means suggested in my paper, and would suggest that had the same treatment been employed in the case of Mrs. X., of his paper, she might have been delivered at full time of a "fine healthy child." I remain very truly,

M. O. JONES, M.D.

Pittsburgh, Pa., March 27.

GIFTS TO DOCTORS FROM PATIENTS.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—The case of Woodbury *vs.* Woodbury, decided by the Supreme Court of Massachusetts March 10, 1886, is one of some importance to medical men. In that case the intestate before her death gave to the defendant certain sums of money, and the evidence tended to show that previous to and at the time of the gift the intestate was in a feeble mental condition and of advanced age. The defendant was the physician, friend, adviser, and fiducial agent of the intestate, managed her affairs, and had considerable influence over her. He was not a relative of the intestate. Upon this state of facts it was held that the evidence, if believed by the jury, would justify a finding that the defendant in some form solicited the gift and used undue influence to obtain it; and that undue influence may be inferred from the nature of a transaction alone.

There can be no doubt of the correctness of this decision. Physicians who, under such circumstances, accept gifts from their patients, assume the burden of showing affirmatively the entire fairness of the transaction and that no undue influence has been used.

M. D. EWELL, M.D.,
Medico-Legal Counsel.

170 Washington St., April 9, 1886.

STATE MEDICINE.

STATE BOARD OF HEALTH OF OHIO.

The following is the Bill recently passed to create and establish a State Board of Health in the State of Ohio.

SECTION 1. *Be it enacted by the General Assembly of the State of Ohio*, That the Governor, with the advice and consent of the Senate, shall appoint seven persons, who (with the attorney-general, who shall be *ex-officio* a member of said Board) shall constitute the State Board of Health; provided, that the terms of office of the seven first appointed shall be so arranged that the term of one shall expire on the 13th day of December of each year, and the vacancies so created, as well as all vacancies occurring otherwise, shall be filled by the Governor, with the advice and consent of the Senate; and provided also, that appointments made when the Senate is not in session, may be confirmed at its next ensuing session.

SEC. 2. The State Board of Health shall have the supervision of the interests of the health and life of the citizens of the State. They shall make careful inquiry in respect to the cause of disease, and especially the invasion or spread of any infectious or contagious, epidemic, or endemic disease, and investigate the sources of mortality, and the effects of localities, employments, conditions, ingesta habits, and surroundings on the health of the people; and shall investigate the causes of diseases occurring among the stock and domestic animals of the State, the methods of remedying the same by quarantine or otherwise, and shall gather information in respect to such matters, and kindred subjects for dissemination among the people. They shall advise officers of Government, or other State Boards, in regard to the location, drainage, water supply, disposal of excreta, heating and ventilating of public buildings. They shall collect and preserve such information relating to forms

of disease and death as may be useful in the discharge of the duties of said Board. It shall be the duty of all local boards of health, health authorities and officials, officers of State institutions, police officers, sheriffs, constables, and all other officers and employés of the State, or any county, city or town thereof, to make and enforce such quarantine and sanitary rules and regulations, as the public health may require, in so far as the success and efficiency of the Board of Health may depend thereon, and in the event of failure or refusal on the part of any member of said Boards, or other officials or persons in this section mentioned to so act, he or they shall be subject to a fine of not less than fifty dollars upon first conviction, and upon a conviction of second offense of not less than one hundred dollars.

SEC. 3. The Board of Health shall have supervision of the State system of registration of births and deaths; they shall make up such forms and recommend such legislation as shall be deemed necessary for the thorough registration of vital and mortuary statistics throughout the State. The Secretary of the Board shall be the superintendent of such registration. The clerical duties and the safe-keeping of the bureau of vital statistics thus created shall be provided by the Secretary of State.

SEC. 4. It shall be the duty of boards of health, health authorities or officials, and of physicians in localities where there are no health authorities or officials, to report to the State Board of Health, promptly upon discovery thereof, the existence of any one of the following diseases which may come under their observation, to wit: Asiatic cholera, yellow fever, small-pox, scarlet fever, diphtheria, typhus fever, and of such other contagious or infectious diseases as the State Board may from time to time specify.

SEC. 5. All amounts recovered under the penalties herein provided, shall be appropriated to a special fund for the carrying out of the object of this law.

SEC. 6. The first meeting of the Board shall be within thirty days after their appointment, and thereafter in January and June of each year, and at such other times as the Board shall deem expedient. The meeting in January of each year shall be in Columbus. A majority shall constitute a quorum. They shall choose one of their number to be president, and they may adopt rules and by-laws for their government, subject to the provisions of this act.

SEC. 7. They shall elect a Secretary who shall perform the duties prescribed by the Board and by this act, and who shall, upon cause, be removed by a majority vote; he shall receive a salary not exceeding $1600, which shall be fixed by the Board; he shall also receive his traveling and *other expenses incurred* in the performance of his official duties. The other members of the Board shall receive five dollars per day, and their traveling and other expenses while employed on business of the Board. The President of the Board shall, quarterly, certify the amount due the members, and on presentation of his certificate the Auditor of State shall draw his warrant on the Treasurer for the amount.

SEC. 8. It shall be the duty of the Board of Health to make an annual report, through their Secretary or otherwise, in writing, to the Governor of the State, on or before the 1st day of November of each year, and such report shall include so much of the proceedings of the Board, and such information concerning vital statistics, such knowledge respecting diseases, and such instructions on the subject of hygiene, as may be thought useful by the Board for dissemination among the people, with such suggestions as to legislative action as they may deem necessary.

SEC. 9. The sum of five thousand dollars ($5000.00), or so much thereof as may be necessary, is hereby appropriated to pay the salary of the Secretary, meet the contingent expenses of the office of the Secretary, and expenses of the Board, and all costs of printing, which, together, shall not exceed the sum hereby appropriated; said expenses shall be certified and paid in the same manner as the salary of the Secretary.

SEC. 10. The Adjutant-general shall provide rooms suitable for the meetings of the Board, and office room for the Secretary.

SEC. 11. This act shall take effect and be in force from and after its passage.

BOOK REVIEWS.

THE PRINCIPLES AND PRACTICE OF MEDICINE. By the late CHARLES HILTON FAGGE, M.D., F.R.C.P., Physician to, and Lecturer on Pathology at, Guy's Hospital; Examiner in Medicine in the University of London; Senior Physician to the Evelina Hospital for Sick Children, etc. Edited by P. H. PYE-SMITH, M.D., F.R.C.S., Lecturer on Medicine at Guy's Hospital, including a Section on Cutaneous Diseases, by the Editor, DR. PYE-SMITH; Chapters on Cardiac Diseases, by SAMUEL WILKES, M.D., F.R.S., Physician to Guy's Hospital and to the Royal Hospital for Children, London; and Complete Indexes, by ROBERT CARRINGTON, M.D., Assistant Physician to Guy's Hospital, London. Vol. II, pp. XVI, 17–883. Philadelphia: P. Blakiston, Son & Co. 1886.

This, the second volume of Dr. Fagge's work, deals with diseases of the Heart, the Digestive Organs, Liver, Spleen, and Kidneys, and of the Bones, Joints, Blood and Skin. There is, we think, more to be said in praise of this than of the first volume. Much of the matter in the second volume is by writers who have had the opportunity of revising their own proof-sheets, and what they have written was only recently written, whereas much of the matter written by Dr. Fagge was prepared some time before his death. Many of the sections were left in an unfinished state at his death, and these have been completed, in an admirable manner, by the Editor and Dr. Wilkes, and at times it is rather difficult to say whether we are reading after Dr. Fagge, Dr. Pye-Smith, or Dr. Wilkes.

In many respects this work is very valuable for reference. Of the treatment advised in it there is but little to be said. In discussing the treatment of

uræmic convulsions, for example, nothing is said as to the use of morphia subcutaneously; which reminds us that the work is singularly deficient in references to American authors and their work. The name of Dr. Flint does occur in the index of authors, but his residence is given as *Philade.phia.* But there are many names of European authors missing from the list which should appear in a pretentious work. Again, in the treatment of peritonitis, while opium is recommended, nothing is said of the use of morphia, regarded by many practitioners as far preferable to opium. Surely the work of Dr. Alonzo Clark should have been thought worthy of mention in this place. We read that "for the actual paroxysm of ague but little treatment is needed." On the contrary, very active treatment is often urgently necessary. No reference is made to the fact that a subcutaneous injection of morphia will arrest the paroxysm, and prevent many of the disagreeable and it may be in some cases very injurious effects. Hot water bottles are all well enough *after* the morphia has been given, if we choose to go to an unnecessary trouble (for they must be removed when the morphia takes effect). Singularly enough the use of mercury in small doses in pernicious anæmia, written of by an Englishman two years ago, is not mentioned. In short, the treatment given throughout the book is unsatisfactory. This, however, is what might be expected when we see that the references to German literature are so numerous.

Of the manner in which the etiology, diagnosis and pathology of diseases have been dealt with scarcely too much can be said in praise. There are some who will take exception to the author's classification of Bright's disease, but an equal or greater number will concur in it. The tests for albumin in the urine are insufficiently given, and should surely have been corrected by the Editor. There are other and very surprising omissions by the Editor. Thus in a foot-note on cholecystotomy his last reference to Lawson Tait's work in this field is to a paper published in 1880.

It only remains to say that the work can only be recommended as one for reference; and for this it is one of great value, especially for those who teach or write.

THE METHODS OF BACTERIOLOGICAL INVESTIGATION. By DR. FERDINAND HUEPPE, Docent in Hygiene and Bacteriology in the Chemical Laboratory of R. Fresenius, at Wiesbaden. Translated by HERMANN M. BIGGS, M. D., Instructor in the Carnegie Laboratory, etc. Illustrated. Pp. 218. New York: D. Appleton & Co. 1886.

Of the many books that have appeared in the last year or two on this subject, this is one of the best. The scope of the book can be learned from the following main headings: Spontaneous Generation and the Principles of Sterilization. Forms of Bacteria and Microscopic Technique. Culture Methods. Pure Cultures. Inoculations for the Determination of the Causal Relations of Bacteria-Growth to Decomposition and Disease. General Biological Problems. Special Hygienic Investigation. Bacteriology as an Object of Instruction.

In this book all the approved methods of investigation have been described. The translation is good. For those desiring to work in this field no better book could be had.

ASSOCIATION ITEMS.

MEMBERS BY APPLICATION AND THE ANNUAL MEETING.

I have received several letters from gentlemen who have become members of the Association by application under the provision recently enacted, desiring information as to their status at the annual meetings of the Association. I have also been the recipient of inquiries from others who wish to become members at the coming meeting at St. Louis through the same channel, that is by application. I will briefly say that those who are already members of the Association, under the new regulation allowing members of State and local societies to become such upon application endorsed by the President and Secretary of such society, are Permanent Members of the Association, and continue as such so long as they remain in good standing in their State or local society and pay their annual dues to the Association. When they attend an annual meeting, they register either as delegates from their original Society, if they have been so elected (with the right of voting), or as Permanent Members (without the right of voting).

Gentlemen who wish to become members of the Association by application at the St. Louis meeting, and who do not attend as delegates, will fill up the usual registration blanks, and present, with the five dollars for dues, a certificate signed by the President and Secretary of their State or local Society, stating that they are members, in good standing, of such Society.

As vacancies doubtless exist in some of the delegations to St. Louis in different parts of the country, possibly some of the Permanent Members and also those desirous of becoming such by application, may be able to obtain appointment as delegates to fill such vacancies.

RICHARD J. DUNGLISON, M.D.,
Treasurer.

Philadelphia, April 13, 1886.

AMERICAN MEDICAL ASSOCIATION.

The Thirty-seventh Annual Session will be held in St. Louis, Mo., on Tuesday, Wednesday, Thursday and Friday, May 4, 5, 6 and 7, commencing on Tuesday at 11 A.M.

The delegates shall receive their appointment from permanently organized State Medical Societies and such County and District Medical Societies *as are recognized by representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

Each State, County, and District Medical Society entitled to representation shall have the privilege of

sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association.

Secretaries of Medical Societies, as above designated, are earnestly requested to forward, *at once*, lists of their delegates.

Also, that the Permanent Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the Secretaries *are, by special resolution*, requested to send to him, annually, a corrected list of the membership of their respective Societies.

SECTIONS.

"The Chairman of the several Sections shall prepare and read, in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections. . ."—*By-Laws*, Art. 11, Sec. 4.

Practice of Medicine, Materia, Medica and Physiology.—Dr. J. T. Whittaker, Cincinnati, Ohio, *Chairman*; Dr. B. L. Coleman, Lexington, Ky., *Secretary.*

Obstetrics and Diseases of Women and Children.—Dr. S. C. Gordon, Portland, Me., *Chairman*; Dr. J. F. Y. Paine, Galveston, Texas, *Secretary.*

Surgery and Anatomy.—Dr. Nicholas Senn, Milwaukee, Wis., *Chairman;* Dr. H. H. Mudd, St. Louis, Mo., *Secretary.*

State Medicine.—Dr. John H. Rauch, Springfield, Ill., *Chairman*; Dr. F. E. Daniel, Austin, Texas, *Sec'y.*

Ophthalmology, Otology, Laryngology.—Dr. Eugene Smith, Detroit, Mich., *Chairman*; Dr. J. F. Fulton, St. Paul, Minn., *Secretary.*

Diseases of Children.—Dr. W. D. Haggard, Nashville, Tenn., *Chairman*; Dr. W. B. Lawrence, Batesville, Ark., *Secretary.*

Oral and Dental Surgery.—Dr. John S. Marshall, Chicago, Ill., *Chairman*; Dr. A. E. Baldwin, Chicago, Ill., *Secretary.*

A member desiring to read a paper before a Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements, at least one month before the meeting.—*By-Laws.*

Committee of Arrangements.—Dr. Le Grand Atwood, St. Louis, Missouri, *Chairman.*

AMENDMENTS TO BY-LAWS.

By Dr. Foster Pratt, Mich.—Each Section shall nominate its Chairman and Secretary—all other nominations to be made, as now, by the nominating Committee.

By Dr. I. N. Quimby, N. J.—Create a new Section, to be known as the Section on Medical Jurisprudence.

WM. B. ATKINSON, M.D.,
Permanent Secretary.
1400 Pine St., S. W. cor. Broad, Philadelphia.

THE SECTION ON PRACTICAL MEDICINE.—The Chairman of the Section on Practice, Physiology and Materia Medica begs to call the attention of members to the unusual array of essays and reports to be presented at the ensuing convention at St. Louis. Papers are already announced by Drs. Wm. Pepper, of Philadelphia, on "Nitrate of Silver in Catarrhal Jaundice;" L. Duncan Bulkley, of New York, on "The Treatment of Felon without Incision;" C. Warrington Earle, of Chicago, on "Pancreatic Anæmia;" L. Bremer, of St. Louis, on "Essential Vertigo;" Albert C. Haven, of Lake Forest, Ill., on the "Etiology of Disease;" Jno. B. Elliott, of New Orleans, on "Fever;" F. H. Patten, of the National Military Home of Dayton, Ohio, on "Pneumonia in the Old;" Philip Zenner, of Cincinnati, on the "Diagnostic Value of the Patellar Tendon Reflex;" A. F. Pattee, of Boston, on "Potassium Chloride;" O. F. Schultz, of Mt. Vernon, Ind., on the "Use of Antipyretic Doses of Quinia in Typhoid Pneumonia;" Edward F. Wells, of Minster, O., on "Pneumonia in Pregnancy;" and Frederick N. Huehn, of Rockland, Maine, on "The Effects of Certain Physiological Principles hitherto Unnoticed in Aid of the Circulation of the Blood."

The session of May 6 will be partly devoted to a demonstration with the cabinet of the principles of "Pneumatic Differentiation," by H. F. Williams, of Brooklyn, to be followed by a general discussion of pneumatic methods to be opened by E. Fletcher Ingals, of Chicago.

Some time during the convention, date to be announced, Dr. Joseph Jones, of New Orleans, will give a brief record of sixteen years' clinical experience in the Charity Hospital of New Orleans, and Dr. S. S. Laws will read a paper on "The Life and Labors of Louis Pasteur."

The mention of the subjects to be presented with the names of the authors, must command unusual attendance and interest in the work of this Section.

J. T. WHITTAKER, M.D.,
Chairman.
April 19, 1886.

RAILWAY CERTIFICATES TO THE ASSOCIATION MEETING—SPECIAL NOTICE.—To delegates and others who will attend the meeting of the American Medical Association, St. Louis, May 4 to 8: Parties located east of Buffalo, Niagara Falls, Pittsburgh and Parkersburg, will apply by mail to Secretary of Trunk Line Committee, 346 Broadway, N. Y., for certificates. Parties west of points named above and east of the Mississippi River, and north of the Ohio River, will apply to Geo. H. Daniels, Commissioner C. P. C., Chicago, Ill., for certificates. Parties south of the Ohio River, and east of the Mississippi River, will apply to M. Slaughter, Commissioner, Richmond, Va. Parties from Missouri River points, and from Chicago, will apply to E. P. Wilson, Arbitrator, Chicago. Points in the west and local points on the lines centering in St. Louis, will be arranged for, by agent at starting point or upon arrival here.

Delegates in making application to the above named persons for a certificate, must not forget to enclose a two cent stamp to pay postage on the return letter enclosing to them the certificate. This must be done to insure the certificate being sent.

Any delegate who fails, after making every effort, to get a certificate in due form, will take a receipt from the ticket agent at the point from which he starts, for amount of full fare paid by him, coming to the meeting; and in this receipt be particular to have named the form and number of ticket, and the road over which he will come. If not directly on one of the lines entering into this arrangement of reduced rates, pay your fare only to it, and then pay your full fare from that point, securing your certificate or receipt as above directed. State, County or City Societies can apply for the number of certificates they may wish, and have the number wanted sent in one envelope instead of applying individually.

Round trip tickets from Chicago, Ill., also from New York (339 Broadway), Richmond, Va., and Washington City, D. C., by Chesapeake & Ohio Railroad, from Philadelphia via Penn. Central and B. & O.

Members of the American Medical Association, or members of any medical societies, who may see the above, will please report it to individual members, or their societies, and try to get a notice of same in their city or county newspaper.

R. M. JORDAN, M.D.,
Chairman Transportation Committee.

St Louis, Mo.

RAILWAY FACILITIES TO THE ASSOCIATION MEETING.—The regular through trains of the Illinois Central Railroad from Chicago to St. Louis will afford excellent accommodations for delegates who wish to attend the meeting of the American Medical Association at St. Louis the first week in May. The night express, with Pullman sleeping-cars, leaves Chicago at 8:30 P.M., and arrives in St. Louis at 7 A.M. The rates are $7.50 round-trip.

The rates on the Baltimore and Ohio Railway for those coming from the East and South-east are full fare coming and one-third fare returning.

The Illinois Central, Chicago and Alton, and the Wabash Railways have agreed to fix the rates from Chicago to the meeting of the Association, for members, at $7.50 *round-trip*.

RUSH MONUMENT COMMITTEE. — The standing committee, charged with the erection of a monument in the city of Washington, to Dr. Benjamin Rush, by the members of the profession of Medicine in the United States, will meet on Monday, May 3d, at 4 o'clock P.M., in the large parlor of the Lindell House, St. Louis, Mo., which will be the headquarters of the committee during the session of the Association.

ALBERT L. GIHON, M.D.,
Chairman.

GEORGE H. ROHÉ, M.D., *Sec'y.*

RAILROAD FARES.—The Boston & Albany Railroad will, upon application at their office, 232 Washington St., Boston, sell to delegates and *their families* tickets to St. Louis and return for one and one-third fares for round trip. A parlor car, to run through from Boston to St. Louis, will be attached to the train leaving Boston at 3 P.M., May 1st.

MISCELLANEOUS.

AMERICAN PUBLIC HEALTH ASSOCIATION.—The Fourteenth Annual Meeting of the American Public Health Association will be held at Toronto, Ont., October 5–8, 1886. The Executive Committee have selected the following topics for consideration at said meeting:

1. The Disposal of the Refuse Matters of Cities and Towns.
2. The condition of stored Water-supplies, and their relation to the Public Health.
3. The Best Methods and the Apparatus Necessary for the Teaching of Hygiene in the Public Schools, as well as the Means for Securing Uniformity in such Instruction.
4. Recent Sanitary Experiences in connection with the Exclusion and Suppression of Epidemic Disease.
5. The Sanitary Conditions and Necessities of School-houses and School-life. (See Lomb Prize Essays.)
6. The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the best Means and Appliances for Preventing And avoiding them. (See Lomb Prize Essays.)
7. Plans for Dwelling-houses. (See Lomb Prize Essays.)

All persons who propose to present papers at the next meeting of the Association will be governed by the following order, enacted by the Executive Committee at Washington, D. C., Dec. 7, 1885: "That all papers hereafter presented to the Association must be either printed, type-written, or in a plain hand-writing, and be in the hands of the Secretary at least twenty days prior to the annual meeting." This order will be strictly enforced, and no paper will be read at the said meeting that has not been received, examined, and approved by the Executive Committee. Invitations extended to individuals to prepare papers for the Association do not imply their acceptance by the Committee, merit alone determining that question. Papers that have been published will not be received.

The Local Committee of Arrangements at Toronto, Ont., have already actively begun the work essential to a large and successful meeting. In addition to the usual work incident to such an undertaking, they will extend invitations to foreign sanitarians, and secure such transportation facilities as will probably ensure a good representation from abroad. Communications regarding matters of transportation or of a local character should be addressed to Peter H. Bryce, M.D., Chairman Local Committee of Arrangements, Toronto, Ont. The coöperation of all persons interested in the public health, or in any subject allied to sanitary science, is respectfully solicited. A circular giving full and concise information regarding local matters, programme, transportation, etc., will be issued in due season before the meeting.

The Lomb Prize Essays.—Mr. Henry Lomb, of Rochester, N. Y., who is already well known as a public benefactor through the prizes which he gave last year for the best essays on certain sanitary subject, offers for the present year the sum of $1750

to be awarded as prizes on the following subjects, as per conditions mentioned elsewhere:

1. The Sanitary Conditions and Necessities of School-Houses and School-Life. One Prize, $500.

The object of the essays must be to furnish the most complete paper possible, embracing as far as may be all the details allied to the subject.

Committee of Award.—Dr. E. M. Moore, President State Board of Health, Rochester, N. Y.; Medical Director Albert L. Gihon, U. S. Navy; Major Charles Smart, Surgeon U. S. A.; Prof. C. A. Lindsley, Secretary State Board of Health, New Haven, Ct.; Dr. J. T. Reeve, Secretary State Board of Health, Appleton, Wis.

2. The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the best Means and Appliances for Preventing and Avoiding them. One prize, $500.

Under this head, the conditions and necessities of the American mechanic are to be especially considered, and the thorough consideration of a class will be regarded of more value by the judges than a superficial review of the whole field. Original investigations will weigh much in awarding the prizes, while compilations from existing literature or foreign statistics will not find favor with the Committee of Awards.

Committee of Award.—Dr. Granville P. Conn, President of State Board of Health, Concord, N. H.; Dr. John Fallon, Member State Board of Health, Lunacy, and Charity, Lawrence, Mass.; Dr. Stephen Smith, New York City; Crosby Gray, Esq., Pittsburgh, Penn.; Dr. C. W. Chancellor, Secretary State Board of Health, Baltimore, Md.

3. Plans for Dwelling-Houses:

(a). A plan for a dwelling-house not to exceed in cost, exclusive of cellar, $800. Prizes: First, $200; second, $100; third, $50; fourth, $25.

(b). A plan for a dwelling-house not to exceed in cost, including the cellar, $1600. Prizes: First, $200; second, $100; third, $50; fourth, $25.

Accommodations to be provided for families consisting of five persons.

Committee of Award.—Major John S. Billings, LL.D., U. S. A., Washington, D. C.; Col. George E. Waring, Jr., C. E., Newport, R. I.; Dr. E. M. Hunt, Secretary State Board of Health, Trenton, N. J.; Dr. J. H. Raymond, Brooklyn, N. Y.; Prof. Charles N. Hewitt, Secretary State Board of Health, Red Wing, Minn.

Specifications Regarding Plans for Dwelling-Houses.—The features which will have especial weight with the committee of award will be: 1. Ventilation. 2. Drainage and other sanitary appointments. 3. Convenience of arrangements. Each design to be represented by the following drawings:

1. A plan of the principal story.
2. A plan of second story (if present).
3. A longitudinal section.
4. A front elevation and drawings of such details as may be required to illustrate any peculiar features of the design. The drawings are to be made all upon one sheet of paper, and comprised within a rectangle of 17½ by 24 inches.

They are to be made at a uniform scale of four feet to the inch, except those representing details, and are to be made by lines, in India ink, without color or washes. Shading, if any, is to be obtained by India ink lines.

The drawings are to be accompanied by a concise, clear description of the arrangements and materials of construction, together with a detailed estimate of the cost of construction, which is to comprise Masonry work, Plastering, Iron work, Carpenter work, Roofing and Painting, Plumbing work, Sanitary appointments, and other required work and materials, and contingent expenses required to render the building ready for occupancy. The estimate to be given for each of the kinds of work above named, separately. The estimates to be made in good faith, from trustworthy data, and to be based upon the present market prices of material and labor in Albany, N. Y. The prices made use of to be given in full detail to enable comparisons to be made for different localities, plumbing to be based upon the supposed use of pump, and estimate to cover so much of pipes and drains as will be within the walls.

Object of this competition is to secure a general statement of the whole question of the best arrangements, both in economical and sanitary points of view, for housing the working classes.

The name of the author of the design is not to appear upon the drawings, or upon anything accompanying them.

Each drawing is to be marked with a selected word or sentence, used as a motto to distinguish the design from others. This motto, written on paper, together with the author's name, is to be enclosed within a sealed envelope, and this sealed envelope is to be enclosed within a second envelope, sealed and endorsed, with the word or motto, only, placed upon the drawing.

Each design, together with the description and estimate, is to be enclosed within a tube of metal or very stout paper—the tube not less than two inches diameter—and sealed and forwarded to the Secretary.

Conditions: All essays and plans for the above prizes must be in the hands of the Secretary, Dr. Irving A. Watson, Concord, N. H., on or before Aug. 15, 1886. Each essay must bear a motto, and have accompanying it a securely sealed envelope containing the author's name and address, with the same motto upon the outside of the envelope.

After the prize essays and plans have been determined upon, the envelopes bearing the mottos corresponding to the prize essays or plans will be opened, and the awards made to the persons whose names are found within them. The remaining envelopes, unless the corresponding essays or plans are reclaimed by authors or their representatives within thirty days after publication of the awards, will be destroyed unopened by the Secretary.

The Committees of Award are empowered to reject all papers and plans, if in their opinion none are worthy of a prize. The essays and plans awarded the prizes are to become the property of the American Public Health Association.

None of the members of the Committees of Award will be allowed to compete for a prize on the subject upon which they are to pass judgment.

The awards will be announced the first week in October, 1886, at the annual meeting of the American Public Health Association.

It is intended that the above essays shall be essentially American in their character and application, and this will be considered by the judges as an especial merit.

Competition is open to authors of any nationality, but all the papers must be in the English language.

While the privileges of competing for the Lomb Prizes is open to all persons, it should be remembered that the highest standard of excellence will be required to win.

Per order Executive Committee.

IRVING A. WATSON,
Secretary.

NATIONAL SANITARY CONVENTION.—A Sanitary Convention, the object of which will be to afford an opportunity for an expression of opinion on matters relating to the public health and the discussion of methods looking towards an advancement in the sanitary condition of the Commonwealth, the prevention of sickness and avoidable death, and the improvement of the conditions of living, will be held in Philadelphia, under the auspices of the State Board of Health, on Wednesday, Thursday, and Friday, May 12, 13, and 14, 1886.

The following will be among the subjects that will be discussed by prominent Sanitarians: 1. The Sanitary Needs of School Buildings and Grounds. 2. The Water Supply of Towns and Cities. 3. The Water Supply of Philadelphia. 4. The Disposal of Slops, Garbage, Refuse, etc. 5. The Prevention of Communicable Diseases. 6. The Influence of Clothing on Health. 7. Ventilation. 8. The Drainage and Sewerage of Cities and Town. 9. The Drainage and Sewerage of Philadelphia. 10. The influence of Diet on Health. 11. The Relations of Christianity to Health. 12. Mistakes in School Architecture. 13. Defective Vision in School Children: Causes and Management. 14. The Necessities of Physical Education. 15. Drainage and Sewerage in Country Districts. 16. Sanitary Science in Villages. 17. Municipal Sanitation. 18. Artificial Feeding of Infants. 19. Condensed Milk. 20. Various Artificial Baby Foods. 21. The Inheritance of Disease. 22. Hygiene of the Home. 23. Sanitary Plumbing and Drainage. 24. Tests for Impurities in Water: The Use of Filters. 25. Germicides. 26. Vaccination. 27. The Hygiene of Old Age. 28. Cholera. 29. City *versus* Country Life, from a hygienic point of view.

The public are cordially invited to take part in and help to make a success of this Convention. A circular of details will be issued at a later date.

JOSEPH F. EDWARDS, M.D.,
Chairman Committee of Arrangements.
224 S. 16th St., Philadelphia, Pa.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS will meet in St. Louis on Monday evening, May 3, time and place to be announced. There will be a banquet, and each member is expected to contribute to the expenses.

MEDICAL ASSOCIATION OF THE DISTRICT OF COLUMBIA.—At a stated meeting of the Medical Association, District of Columbia, held on the 6th inst., the following were elected officers for the ensuing year:

President.—Dr. J. M. Toner.
First Vice-President.—Dr. J. W. Bulkley.
Second Vice-President.—Dr. Geo. Byrd Harrison.
Secretary.—Dr. Lachlan Tyler.
Treasurer.—Dr. S. S. Adams.

GEORGE N. POWERS, M.D., has been appointed Professor of Ophthalmology and Otology in the Medical Department of the University of California, to fill the vacancy occasioned by the recent death of Professor A. M. Wilder, at San Francisco.

NEW YORK STATE MEDICAL ASSOCIATION—FIFTH DISTRICT BRANCH.—The fourth special meeting of the Fifth District Branch will be held in Kingston, on Tuesday, June 15, 1886. All Fellows are cordially invited to contribute to the meeting, either by reading papers, notes or communications, or by exhibiting specimens. The Secretary will be glad to receive the title of any proposed paper as early as convenient. E. H. SQUIBB, M.D. *Sec'y.*
P. O. Box 94, Brooklyn, N. Y.

HÆMORRHAGE AFTER UVULOTOMY.—DR. E. CARROLL MORGAN, 918 E. St., N. W., Washington, D.C., wishes to collect recorded and unrecorded cases of this accident, in order to publish a monograph on the subject.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 10, 1886, TO APRIL 16, 1886.

Capt. J. H. Patzki, Asst. Surgeon, relieved from duty at Jackson Bks., La., and ordered for duty as Post Surgeon at Mt. Vernon Bks., Ala. (S. O. 75, Dept. East, April 12, 1886.)

Capt. Jno. Van R. Hoff, Asst. Surgeon, leave of absence extended for eleven months, with permission to leave the United States. (S. O. 85, A. G. O., April 12, 1886.)

Capt. Richard Barnett, Asst. Surgeon, granted leave of absence for two months. (S. O. 16, Div. Atlantic, April 12, 1886.)

Capt. H. P. Birmingham, Asst. Surgeon (Camp Grant, New York City), temporarily assigned to duty at Ft. Columbus, New York Harbor. (S. O. 72, Dept. East, April 8, 1886.)

First Lieut. Philip G. Wales, Asst. Surgeon, granted leave of absence for two months. (S. O. 85, A. G. O., April 12, 1886.)

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDED APRIL 17, 1886.

Wyman, Walter, Surgeon, to represent the Service at the meeting of the American Medical Association, at St. Louis, Mo. April 12, 1886.

Sawtelle, H. W., Surgeon, detailed as chairman of Board for physical examination of officers of the Revenue Marine Service. April 15, 1886.

Urquhart, F. M., Passed Asst. Surgeon, relieved from duty at Norfolk, Va., May 1, 1886; to assume charge of Cape Charles Quarantine. April 16, 1886.

Yemans, H. W., Passed Asst. Surgeon, detailed as recorder of Board for physical examination of officers of the Revenue Marine Service. April 15, 1886.

Heath, F. C., Asst. Surgeon, appointed an Asst. Surgeon. April 15, 1886. Assigned to duty at Chicago, Ill., April 16, 1886.